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Pencil Points

PROGRESSIVE ARCHITECTURE

December, 1944

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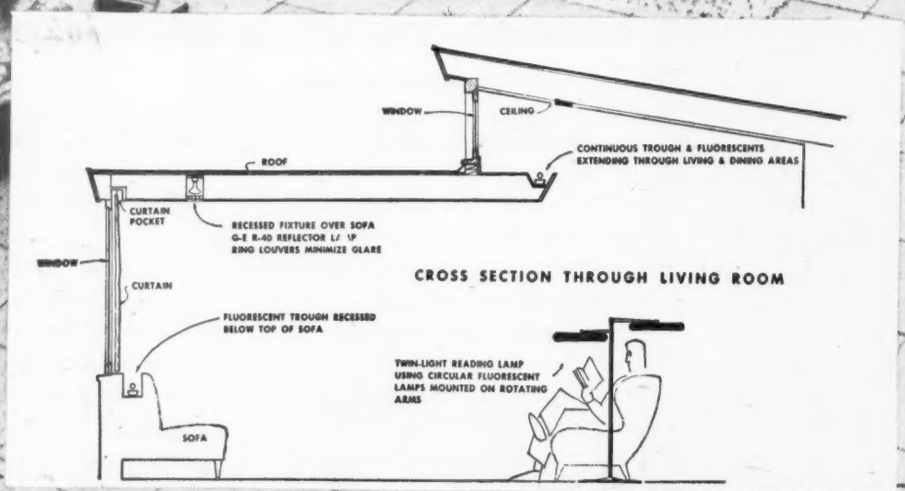
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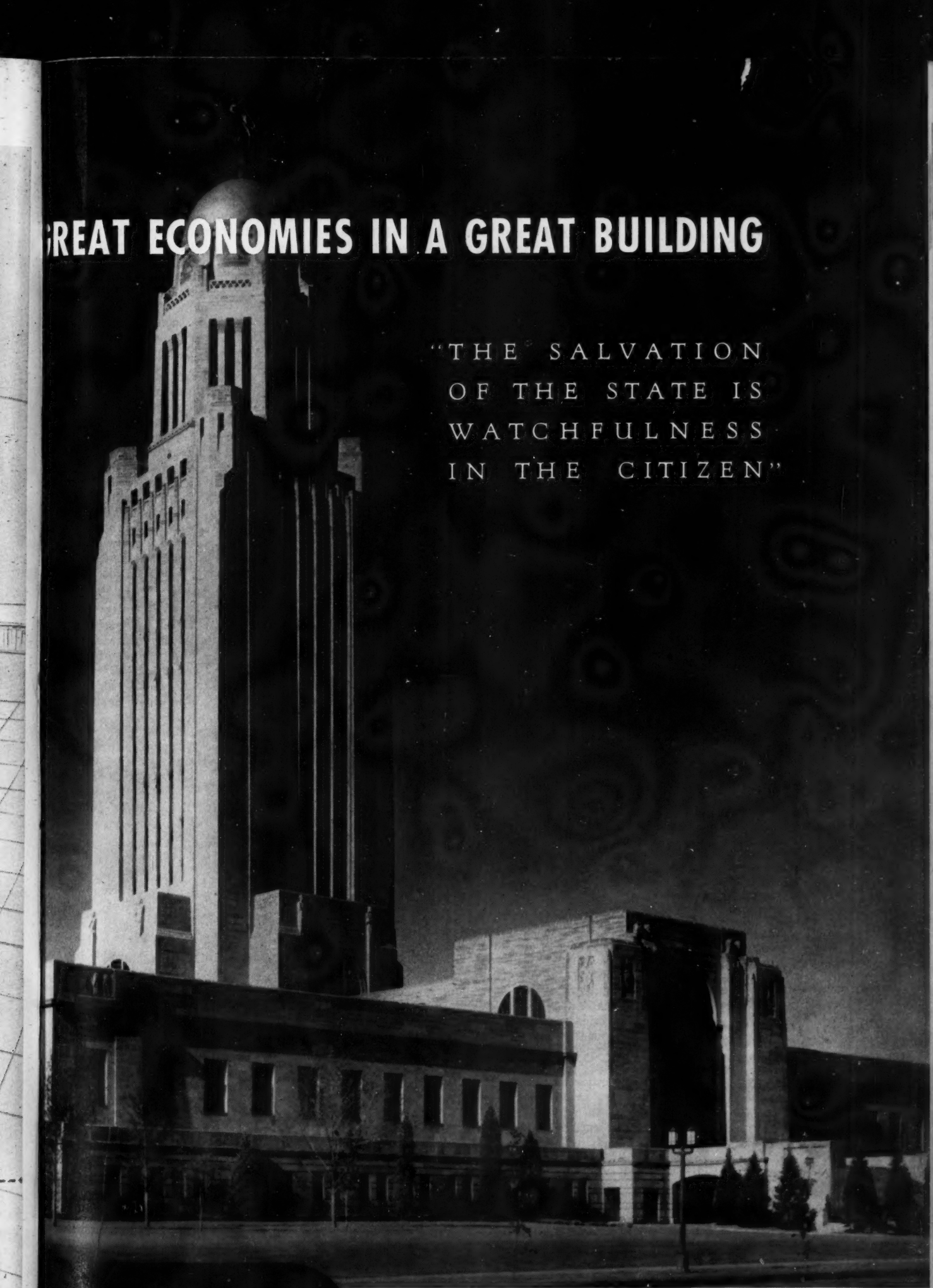

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Views

Opinions from readers

Remarks from the editors

Changes of address

Creative Expression

Dear Editor:

Among my friends, both in the Army as well as formerly in Australia, among Australian civilians and soldiers, the changes in the editorial policy of PENCIL POINTS since 1943 have won highest regard and full approval. You have to be congratulated particularly on the issue "Patio Houses" and the work of Saarinen. It is to be hoped that the postwar development in the fields of architecture, art, and industrial design will follow the standards set in your publication. By the way, how about extending the field further by covering the documentary film, typography, photography, and related subjects? They all play an important part in the creative expression of modern or, should I say, contemporary design.

T/SGT. ERNEST A. JACOBS (USA)
"Somewhere in the Pacific"

A.S.L.A. OFFICIAL TAKES ISSUE WITH SCHINDLER COMPARISON.

When R. M. Schindler, in "Views" for October, undertook to chastise architects for their present failure to dominate the building industry, he chose to be blunt. (Not an architect has replied "yea" or "nay" to date—which amounts to an undeniably dead vacuum.) But the fact that the crusading Californian did not moderate his language when referring to services and remuneration of various other members of the industry has resulted in stirring the landscape architects, whose indignation is politely though firmly expressed in the following letter from the Corresponding Secretary of Landscape Architects. In it are well stated the points made by a number of A.S.L.A. members who have been urged to write to the editor and we are pleased to present this comprehensive statement of the A.S.L.A. position—finding it impossible to give space to all of the replies received. This seems to us a stimulating example of the service these columns can render by bringing controversial opinions into the open so that the resulting discussions can erase mistaken impressions.
C. M.

Dear Editor:

In looking over the October issue of PENCIL POINTS I was considerably surprised at certain incorrect and misleading statements concerning the landscape architect which appear in the department of "Views" in that issue.

Mr. R. M. Schindler, who is well known for his work in the field of domestic architecture in California, presents on page 16 the first of a two-part article in which he attempts to compare "the services rendered and remunerations received by the various members of the building industry."

In describing the contribution of the landscape architect, Mr. Schindler writes: "He plans the environment of the house, specifies the plants, and supervises their planting. His principal equipment consists of a knowledge of plants and locale, coupled with a feeling for style and enough imagination to give form to his garden. Little detailing is involved, since nature provides the units for his 'arrangement.'

"He charges the owner fifteen percent on the total cost of the job, and in addition collects a commission of about twenty percent from the nursery providing the stock."

This statement as a characterization of the landscape architect and his methods of practice in the United States is so little based on fact that it merits prompt correction.

If Mr. Schindler were more widely acquainted throughout the country with the services of the landscape architect in the building industry (by which I assume he means solely private residential housing), he would not have attributed to the whole profession certain characteristics that he seems to have found among the comparatively few landscape architects with whom he has chanced to work in California.

In saying that the landscape architect "plans the environment of the house, specifies the plants, and supervises their planting," Mr. Schindler falls far short of describing the landscape architect's actual function in residential development.

Mr. Schindler seems to be unaware that in common practice throughout the country the interests of the owner are best served when the landscape architect is considered as something more than a horticulturist and is given an opportunity to advise his client from the very conception of the undertaking. Because he is experienced in the design of neighborhood developments, the landscape architect is able to give valuable advice on the selection of the individual house lot prior to purchase of the property. Through his ability to visualize the possibilities of a given site, together with his highly developed feeling for ground forms and long experience with the modeling of earth surfaces, he is especially competent to advise on the placing and orientation of the house to make it fit most appropriately and economically the natural conditions of its site. Because he knows intimately the purposes which the immediate house surroundings must serve to produce the utmost efficiency of land use and the most attractive resulting appearance, he is particularly qualified to suggest the location, form, and character of the approach, the service areas, and the pleasure grounds, and to develop them for practical use and aesthetic enjoyment. Mr. Schindler's "plans the environment of the house" hardly embraces as broad a conception as this.

While, as Mr. Schindler intimates, the specification of plants and supervision of their planting is an important part of the work of the landscape architect in producing the finished landscape effect, he is quite misinformed in believing that the landscape architect's "principal equipment consists of a knowledge of plants and locale, coupled with a feeling for style and enough imagination to give form to his garden."

To be sure, a knowledge of plants, embracing their possibilities as an element in design as well as the practical considerations of their handling and maintenance, constitutes a technical field of knowledge in landscape architecture that is not ordinarily shared by the other design professions; but it is quite secondary to the landscape architect's principal equipment, which comprises an understanding of basic design supplemented by the technical knowledge necessary to build structures above and below ground incidental to landscape architectural development.

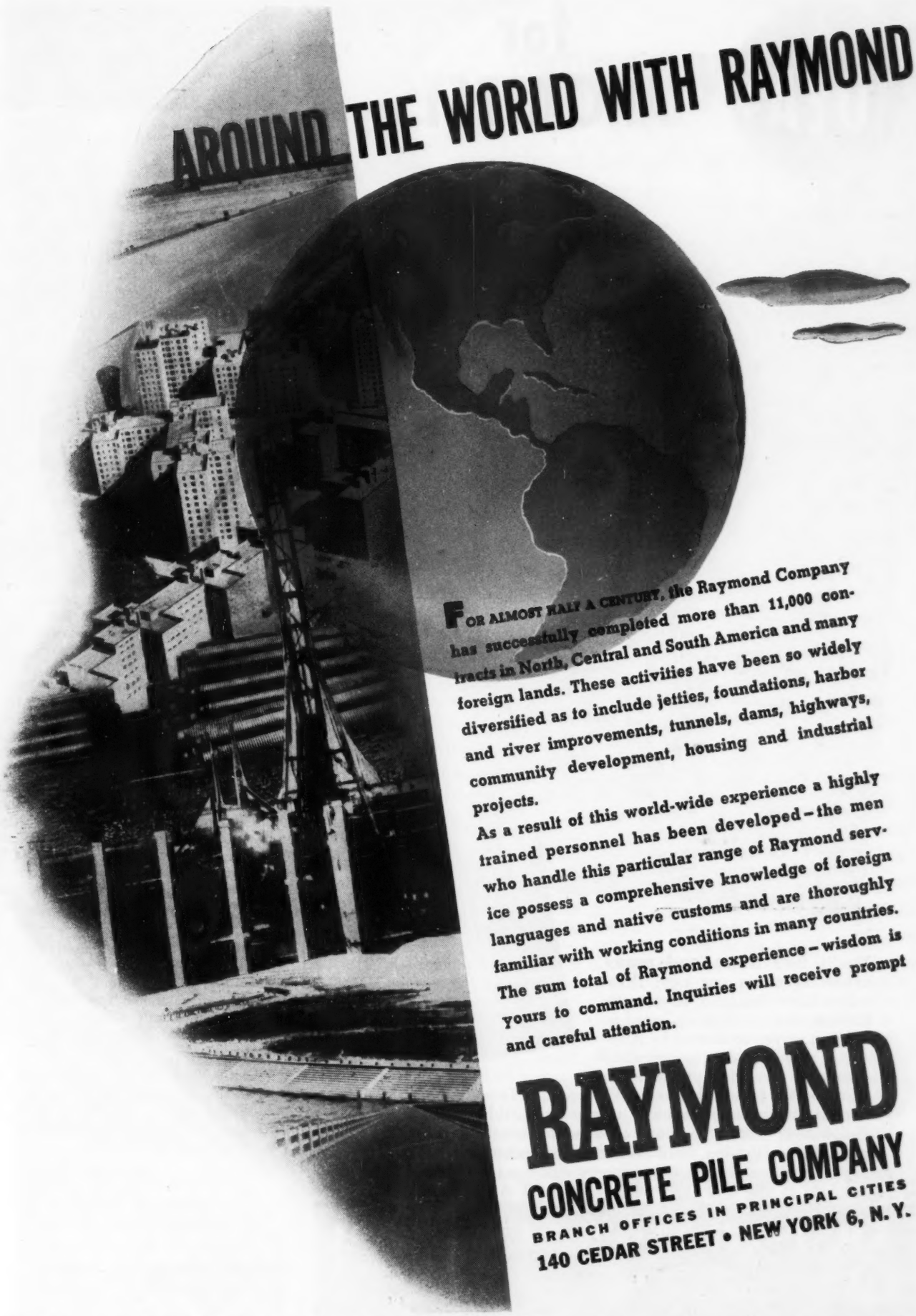
Perhaps Mr. Schindler's difficulty lies in choice of words. If in the passage quoted he were to substitute "knowledge of topography" for "knowledge of locale," "understanding of design" for "feeling for style," and "creative ability to give expression to his ideas" instead of "enough imagination to give form to his garden," the resulting characterization would be a truer picture of the landscape architect as one who practices a creative art that has long been recognized as comparable to the arts of architecture, sculpture, and painting.

Mr. Schindler's words, however, are completely without meaning when he says of the landscape architect's work: "Little detailing is involved, since nature provides the units for his 'arrangement'."

Obviously Mr. Schindler is not conversant with the infinite detail which is involved in—say—fitting an entrance drive to a rugged piece of topography with proper respect for the natural land forms while developing a nicety of gradient and a smoothness of profile. This is but one of many types of landscape problems in which a great deal of detailing is involved. Nature does indeed provide the landscape architect with "units for his arrangement" in the landscape, but few landscape architects would attempt to arrange them in a complicated grading scheme from a mere sketch design drawn in the field on the back of an envelope. Mr. Schindler could equally truthfully say of his own profession that nature provides the architect with units for structural and aesthetic composition, but he would hardly dare say that their arrangement involves little detailing!

Mr. Schindler makes a statement that is not true of our profession as a whole

(Continued on page 10)



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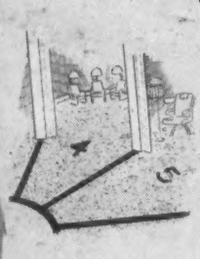

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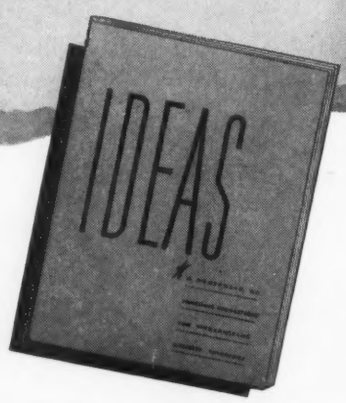

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Views

(Continued from page 8)

when he says that the landscape architect "charges the owner fifteen percent on the total cost of the job." There is no concerted method of charge within the profession; some offices base their charge for residential work on a percentage of the cost of construction, while others prefer the lump-sum charge, the per-diem charge, or the charge based on cost plus a fixed fee; and when they do use the percentage method the fee varies both according to the reputation of the office and on a sliding scale which provides for a decreasing fee as the cost of work increases. Undoubtedly Mr. Schindler must mean that, as far as his experience goes, the landscape architect's charge for his services has been set at fifteen percent of the total cost of the work.

It is regrettable that Mr. Schindler should have made as sweeping a statement as that in which he claims that the landscape architect, in addition to the fee for professional services which he charges the owner, also "collects a commission of about twenty percent from the nursery providing the stock." No member of the American Society of Landscape Architects can do this without violation of the Code of Professional Ethics to which each member of the Society subscribes when elected to membership. The Code specifies distinctly that ". . . it is unprofessional for a landscape architect (1) to receive any renumeration, directly or indirectly, in the form of a commercial or speculative profit on materials or labor; (2) to accept any compensation, in the form of a commission or otherwise, from any person from whom services or materials are procured on behalf of the client."

Instead of offering a commission to landscape architects on orders for material supplied to a client, nurserymen have been accustomed for many years to grant a discount *to the client* of a landscape architect—which is quite another thing.

I hope that you will be kind enough to publish this letter in full to correct Mr. Schindler's highly misleading picture of the landscape architect and his methods of practice in America.

BRADFORD WILLIAMS,
Corresponding Secretary,
American Society of Landscape Architects, Boston, Mass.

GEORGE F. ROOT, 3RD, Architect, has moved his offices to 101 Park Ave., New York, N. Y.

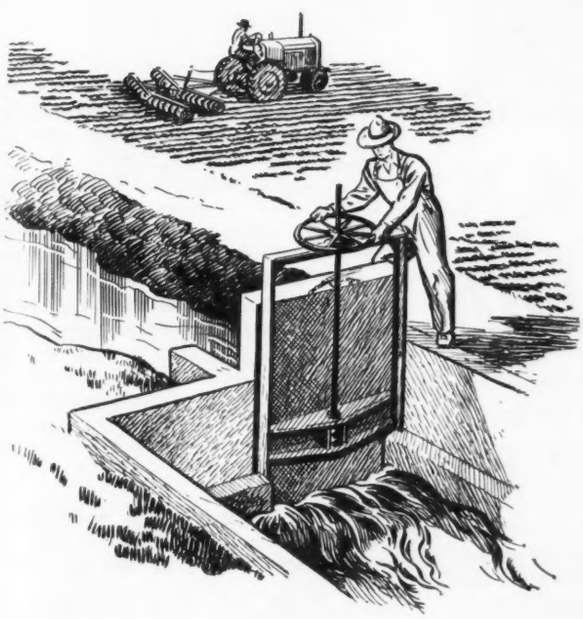
(VIEWS *continued on page 12*)

ALL his life the Oriental peasant works ankle deep in water. If imagination stirs his primitive soul, he may dream of an easier way to water his rice paddy than by endlessly climbing the paddles of a wooden wheel to lift water from the canal.

He has never heard of anything so easy, so luxurious as the water systems that serve American farmers--built of steel pipe, steel pumps, steel tanks--which automatically bring plenty of clean, pure water for crops, livestock and all family needs.

Most of us can remember when even the American farmer's lot was little better than that of the Oriental peasant. That was before steel was plentiful--before manufacturers like Youngstown had devised efficient, economical methods to produce pipe, plates, sheets, bars, rods and wire for the fabrication of farm implements, tractors, trucks, automobiles, cribs, fencing, home equipment and the hundreds of other steel products that have freed the American farmer and his wife from much of their drudgery.

Without steel, America would revert to the primitive ways of our ancestors and of the world's "backward" countries. Fortunately, America has steel enough--steel to win the war now, and then to advance our civilization to new heights and guard it in lasting peace.



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Views

(Continued from page 10)

SCIENCE OF FORM

Dear Editor:

After thumbing the pages of your October issue and finding little of interest to a retired architect-engineer, whose only interest in the profession lies in an attempt to lead it into the paths of righteousness and sound geometry, I turn to your column of "Views," my only key to what is in the mind of the practicing architect.

Many of your correspondents seem to agree that no very bright future lies ahead for the architect so long as the existing economic muddle endures. With this I am entirely in accord, yet it does not excuse him for all his failures and shortcomings. There is much that he does not know and a lot that he refuses to learn.

The most serious criticism of the architect is that he refuses to recognize the simple science of his own trade.

"The Architect must somehow learn to know not only the psychology of aesthetics, but the applicable fundamentals of economics, finance and business, real estate and building law, hygienics, sociology and civics, as well as structural and mechanical engineering, not to mention the prevailing contrariness, perversity, and capacities of men." This I quote from a letter by Henry K. Holsman, F.A.I.A.

"Psychology of aesthetics" is by no means a term that conveys definite meaning to the engineer.

To place this at the head of a rather formidable list of the architect's educational requirements seems to emphasize the one great weakness of his training.

To me it seems most obvious that the principal item in his training should be a knowledge of form and proportion. Any engineer can draw a floor plan of a building, design the structural elements, clothe it with four walls and a roof, and as I have sometimes heard him say, all he needs is the exterior decorator to complete his work.

All this is true provided we place no value on form. We have all seen such buildings as may have been produced by this method, and we know just how hideously ugly they can be.

What then is it that the engineer lacks? The answer is that he knows nothing about the simple science of form. He must therefore call in the architect who, through long years of study of ancient and contemporary architecture, has acquired a sense of form and proportion which the engineer lacks.

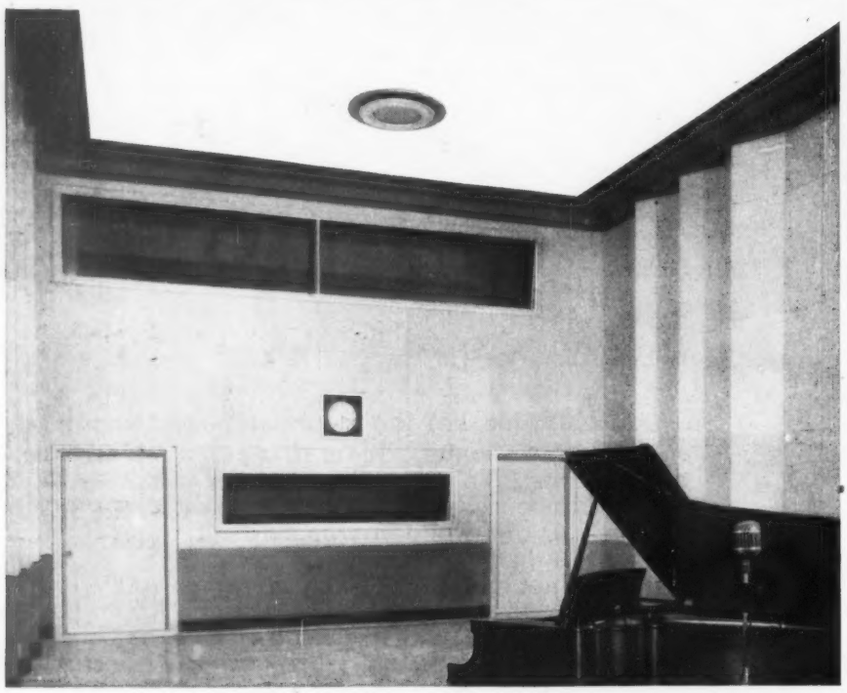
Concerning the actual science of form, however, the architect is just as ignorant as the engineer and, unfortunately, far less likely to be impressed with its importance, for which reason the engineer seems the more likely to be the first to acquire a knowledge of the science. He already has the abstract idea of proportion, summed up in the simple formula, a is to b, as b is to c, or $ac=b^2$. His training enables him more readily to understand the method whereby this can be applied to problems of architectural form, and he is not burdened with the architect's apparently inextinguishable prejudice which resents this intrusion of science into the sacred precincts of art.

When the engineer has acquired a knowledge of this simple science of form, what becomes of the architect?

The answer seems to be that unless in the meantime the architect has devised a more attenuated formula in which to express his ethereal virtues, he may be called in as an expert on the "psychology of aesthetics."

H. A. RUSSELL, Architect-Engineer
Halifax, Nova Scotia

(VIEWS continued on page 14)



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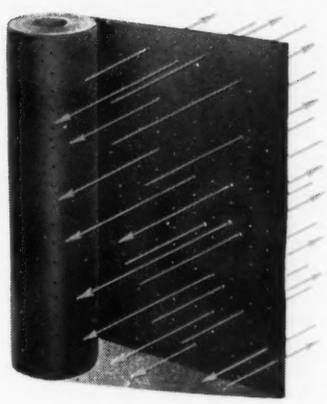

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Views

(Continued from page 12)

WHOSE FAULT IS IT?

Dear Editor:

I have been reading with great interest the series of articles in "Views" by Edmund Howe Poggi. As much as I would like to agree with his statements and opinions, I find it an impossibility. I believe I speak for the majority when I say that it seems he is attempting to place the blame on the General Contractor for a deplorable situation for which the Architect himself is responsible.

The fault certainly lies with the farmer who allows his potato crop to be overrun by the potato bug—you can't blame the bug for taking all it can.

May I make myself clear at this point: I am not writing this in defense of the General Contractor, nor can I fully sympathize with the Architect in the predicament in which he finds himself today.

In April of 1941 I wrote a letter to "The Threshing Floor" which expressed my opinion in the matter of Architect-Contractor-Client relations. I had hoped to provoke some action by the profession. To date the situation is little improved, if any. I do not think it fair or reasonable to conclude that the Architect is the victim of circumstances.

It seems to me that Mr. Poggi fails to realize that the average Architect of today is not capable of being the "Master Builder" and, until the present educational system is revised, he will *never* become one.

A review of the Architect's basic and academic training given in a recent publication indicated that 84% of his time is devoted to design, history, and representation; the balance—16%—to engineering, management, office procedure, working drawings, etc. By contrast, in actual practice, design consumes about 20% of his time, thus necessitating years of actual experience "over the boards" and on the job to be able to even approach the qualifications of a "Master Builder."

To play this role of "Master Builder" the Architect must be designer, engineer, business man, builder (or contractor), and supervisor. This is beyond the realm of capability for the average Architect. I use the word "average" because there are a few men who can, and do, successfully assume these duties.

What Architect Poggi is actually advocating is universal acceptance of the Separate Contract system; an excellent method of contracting for the execution of the work. The client lets many contracts with master mechanics of the several trades and substitutes the Architect for the position of General Contractor. He will receive closer bids than would be sent to a General Contractor. Under this system the Architect's burdens increase no end. He must keep more records, guide and supervise the work of many tradesmen, harmonize their operations, carry on heavier correspondence, and be at the job site more frequently than is ordinarily the case. In other words, he would be approaching the status of "Master Builder." I do not believe the "average" Architect is equipped to do this.

The job of handling, supervising, and coordinating all branches of the complex construction work of the 20th century is a business in itself. If the Architect is to add these duties to his present ones, he must indeed become a superman.

It is not a statement of the facts to say that the General Contractor is out to increase his profits by misleading the client to accept inferior building products. The statement must be qualified. Doesn't the Architect have anything to say about the quality of materials? The Contractor's reputation is dependent upon his ability to produce excellent workmanship just as in any other competitive business. A builder of ill-repute need not be invited to submit bids under

(Continued on page 16)

BRIGHT SPOTS

One of the highlights of the industrial picture is the speed with which American manufacturers developed adequate products when war took their vital materials and key manpower.

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Three Sisters Store, Chicago, Illinois. Anaconda Architectural Bronze installed by J. S. Heath Company, Mitchell Corporation, North Chicago, Ill., successor.

The distinguished-looking storefront is an invitation to customers. It is accepted as evidence of the permanence of the establishment.

Through the use of bronze, distinction in storefront and building facade design can be achieved. As practical as it is beautiful, Architectural Bronze provides durability and low upkeep expense. It is rustproof, resists atmospheric corrosion and weathers gracefully.

The American Brass Company has long been the principal supplier of Bronze, Copper and Nickel Silver in the form of extruded shapes, drawn shapes, sheets, etc., as used in the construction of ornamental work of every description. 4434

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ANACONDA from mine to consumer

Anaconda Architectural Bronze

THE AMERICAN BRASS COMPANY—General Offices: Waterbury 88, Connecticut
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Views

(Continued from page 14)

the competitive bid-contract system. The Architect can require that the names of all Sub-contractors appear, substitutions, satisfactory to all concerned, can be made prior to signing the contract. Today's General Contractor cannot afford to sell the client down the river and still hope to remain in business. Competition is too keen.

Why dodge the issue? It's up to the Architects to put themselves before the public; to teach them that professional service is *not* a luxury but a *necessity*. If advertising is the answer, then let's advertise! If the Architect is to continue to do nothing about his dilemma, he should not accuse the Contractor of intent to do away with him.

The Contractor is going to go as far as he can until he is checked. That is human nature. Let us realize this—AND DO SOMETHING ABOUT IT!!!

GILBERT RAYMOND GOLDING
Ass't. Project Engineer
Pacific Naval Air Bases
Honolulu, Hawaii

RIC-WIL FURNISHED MORE THAN 25,000 FT. OF PREFABRICATED INSULATED PIPE CONDUIT

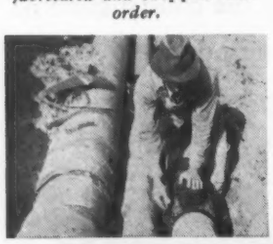
For Terrace Village Housing Unit No. 2 in Pittsburgh

Fuel savings of 15% or better are made possible in this mammoth project by a central heating system. Ric-wiL pre-fabricated pipe units provide the insulation and protection for the entire underground distribution system.

A total of 83 buildings, comprising 1851 living suites, are supplied with heat and hot water from a central plant, through an underground distribution system containing over 25,000 lineal feet of Ric-wiL pre-sealed Insulated Pipe Units. High-pressure steam from the plant is piped through Ric-wiL steam conduit to six scattered stations where hot water is generated and circulated through Ric-wiL conduit to all the buildings, for heating and hot water supply. Thus the project realizes the economy of steam, and the temperature control and convenience of hot-water heating.

Line of Ric-wiL conduit from anchor to boiler house (top, left). Note shallow, narrow trench.

Installing connector band. All necessary accessories are prefabricated and shipped with order.



Any Community Can Incorporate These Advantages of Central Heating in Their Postwar Plans

- Savings of 15% or better in overall fuel consumption.
- Elimination of furnace or boiler tending by consumer.
- Promotes cleanliness in buildings heated.
- Provides extra room in building basements.
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- Reduces smoke and soot, provides cleaner, healthier community.
- Eliminates private coal delivery and ash removal.
- Gives uniform, clean heat quickly, whenever needed.

For information about Ric-wiL Conduit for central heat distribution, get in touch with your nearest Ric-wiL agent or write to us direct for our new Catalog No. 44

RIC-WIL INSULATED PIPE CONDUIT SYSTEMS
THE RIC-WIL COMPANY · CLEVELAND, OHIO
AGENTS IN PRINCIPAL CITIES

BUILDING IN THE U. S. A.

Is the Building Situation in New York City a Key to Conditions Throughout the U. S.?

In New York City's Manhattan Borough, over $127 million worth of private postwar building is seriously contemplated—over and above the much publicized public program for the same period. This can truthfully be called a serious private building program because plans have been filed with the city building department. It can be labeled more than serious—the majority of these applications represent a frightened, scrambling protest against the first enlightened zoning legislation that New York has had in twenty-eight years.

It would appear that, insofar as actual commitments are concerned, the New York City situation is far from typical. Other factors can be cited as contributing to such an opinion, including the fact that the New York area has suffered less from manpower shifts than, say, the Los Angeles area; that New York is metropolitan, and there are a limited number of similar urban areas in the country; that the skyscraper problem and all the others attendant upon the concentration of "big" businesses in New York are not found in anything like the same degree elsewhere in our fair land.

But examination of the facts—as far as cagey building operations reveal them—and a willingness to face known conditions will probably lead the thoughtful man to an opposite conclusion. There's at least a basis for arguing that, in this instance at least, New York City does mirror the nation. "Oh yeah?" says the man from Missouri. "How do you get that way?"

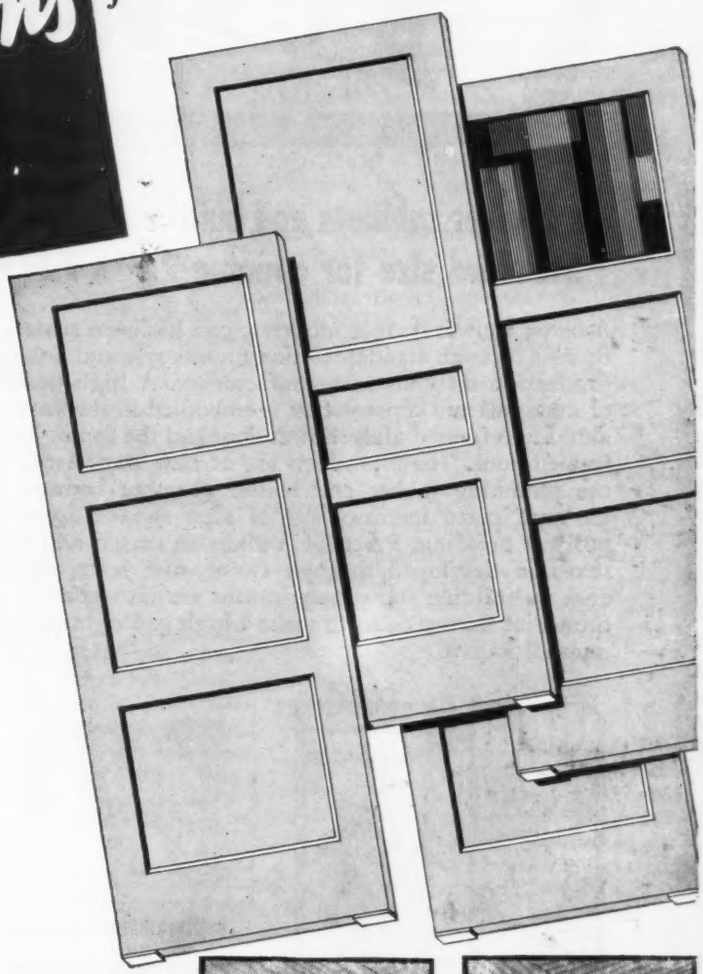
To explain, we have to find out what has happened. Ordinarily, large building operators (to use the polite synonym for speculators) don't tip their hands until the last minute. Somebody might be unscrupulous enough to horn in on their private good things. But somebody in New York's official family proposed a change in zoning laws which had the avowed purpose of letting more light, air, and green into the city. This had to be done if the official city was to face, honestly, the fact that lack of such simple amenities contributed greatly to New York's growing difficulties—disparity between appraised and true property values, loss of population, etc. Somebody always gets hurt (in the pocketbook) when such simple, basic changes are actually made; in this case, the speculator (let's drop the mask!) stood to lose that extra profit which is always so attractive to some people.

The speculator howled, of course. Why, you couldn't erect a "profitable" building under these new-fangled proposals. He avoided openly crying, "Who ever heard of building with decency," but he came close to it. When he realized

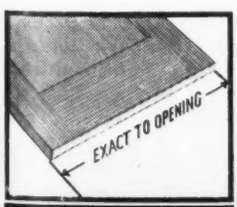
(Continued on page 18)

For Door Specifications

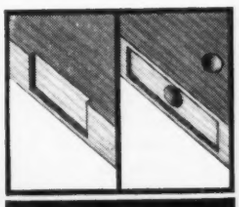
Modern 3-Panel Douglas Fir Doors Offer Attractive Layouts for Every Building Purpose



- Attractive, durable, smartly-designed Douglas Fir Interior Doors feature basic 3-panel layouts which are ideally adaptable to all types of building—designs in keeping with present-day interior treatment.
- These fine doors now offer the added advantages of a new FACTRI-FIT line. To your client, this means faster construction, a better fitting, better hanging door, and the elimination of unsatisfactory on-the-job cutting.
- You'll find that Douglas Fir Doors are suitable for every door specification—on today's essential jobs and on ALL building tomorrow.



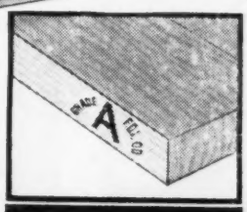
1 FACTRI-FIT doors are pre-fit at the mill, trimmed to exact size, ready to hang without sawing or fitting.



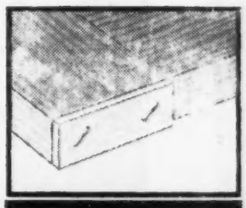
2 FACTRI-FIT doors may be ordered completely machined at your option—gained, bored or mortised by high-speed precision tools.

FACTRI-FIT
PRECISION-BUILT DOUGLAS FIR DOORS

A new line, available at slight additional cost—a cost more than offset by savings on the job.



3 FACTRI-FIT doors (like all Douglas Fir Doors) are edge grade-marked for ease in ordering, specifying and supplying.



4 FACTRI-FIT doors are scuff-stripped to protect the precision-cut corners during handling and shipping.

Douglas Fir DOORS

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Remember! NATURE MAKES DOUGLAS FIR *Durable!*

Durable Douglas Fir Doors are made from all-heartwood, vertical-grain, soft, old-growth Douglas Fir.

Write for catalog showing complete series of Douglas Fir Interior Doors, Tru-Fit Entrance Doors, and new specialty items.

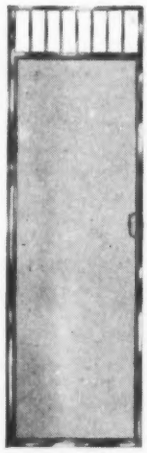
Douglas Fir Doors are now available only for essential building. They'll be ready for general use again when war needs lessen.

FIAT

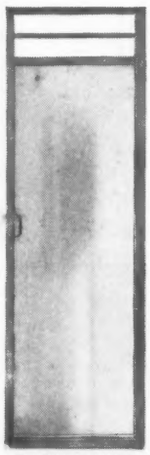
GLASS SHOWER DOORS

For shower cabinets and built-up showers
Standard size for opening 24" x 72"

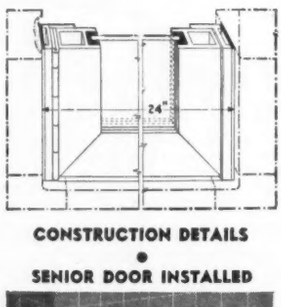
A better shower door at moderate cost has been achieved by Fiat through standardization on one size and volume production methods in manufacturing. A high quality of materials and construction is embodied in the Zephyr aluminum framed glass shower door and the Senior brass framed door. These products are of new importance to the plumbing jobber and master plumber because of the anticipated increased use of glass shower doors in postwar building. Practical features in design and construction developed through twenty-five years experience in building shower equipment are incorporated in these Fiat shower doors to make a high grade product of unusual values.



SENIOR DOOR
Chromium plated brass



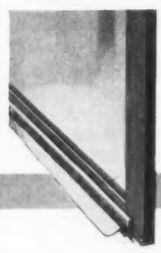
ZEPHYR DOOR
Aluminum



CONSTRUCTION DETAILS

SENIOR DOOR INSTALLED

The water deflector with gutter prevents water dripping on the floor when door is opened.



FIAT METAL MANUFACTURING COMPANY

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Views

(Continued from page 16)

that, for some (unfathomable) reason, the proposals probably would become law, he and his architect (or engineer) rushed to get plans filed, in order to have at least a pretense of standing upon old-law zoning regulations if the new should be enacted. Proof of this motive is an uncontrovertible series of facts: the zoning change was proposed June 14, 1944. Between January 1 and June 1, 1944, plans were filed for only three apartment buildings, whose total cost was stated to be $585,000. Since June 1, 1944, plans have been filed in Manhattan alone for $127,504,700 worth of what the N. Y. Herald Tribune calls "substantial new private building." We'll say it's substantial! It includes 127 structures at more than $100,000 apiece. It's bigger than any year since 1930, when the money total was over $160 millions; tremendously bigger than last year's so-called all-time low, $545,850 (what did the Indians or the Dutch build, in dollar value?).

So in their fright the operators tipped their hands. By the way, they're gambling as usual though more desperately than in "normal" times. The new law renders all plans invalid unless bona fide work on foundations has been started, and wartime restrictions prevent that. But courts might set aside the regulations if it can be shown that the plans were filed in good faith and that building was held up by government order. Such decisions have already been handed down in cases where priorities have prevented fulfilment of building regulations. If intent to get around an inconvenient law can be proved, we would suppose that the law would be upheld.

The N. Y. City Planning Commission voted Nov. 1 to amend the basic Zoning Resolution by imposing additional restrictions on the height and area of new buildings throughout the city. The amendment according to the commission is "to increase the open space, light, and air about buildings hereafter erected," thereby decreasing traffic congestion, improving realty values and avoiding "blighted" areas. The amendment had the loud approval of *Park* Commissioner Robert Moses and was passed with a single dissenting vote, that of *Building* Commissioner Irving V. A. Huie, whose alternative proposal for "bulk" zoning was rejected by his associates. It then went to the Board of Estimate, where action was still pending as we went to press this month.

So much for the particular New York situation. As for the other parts of the country: we recognize, if we're sensible, that in the great metropolitan centers is concentrated the greatest number of

(Continued on page 21)

our large private building projects. It is difficult to grasp the total volume of small rural construction jobs, enormous though the total may be. Occasionally a sanitarium, or a building for a small-town college, gets in the news, but this is exceptional. The TVA and public housing, some of which is in a sense rural, are, after all, *public* ventures. It's the private market we're talking about.

It's no secret, either, that the private building operator is secretive—they call it "conservative"—about his schemes. Undoubtedly, in Chicago, San Francisco, Portland (Oregon), Kansas City, Dallas, and many another urban center, furtive hopes are now shaping up on well secluded drafting boards, in private offices, in savings-bank-presidents' sanctums. That, too, is the nature of the private operator; hope *does* spring eternal; partly because he builds in an immediate-profit, to-hell-with-the-long-term-consequences, get-on-to-the-next-job fashion, and partly because hope itself, is a peculiarly American characteristic.

If you judge, then, by the nature of the private operator, and consider what fright led him to uncover in just one of New York City's five boroughs, boy! This postwar building market is really going to be something. And we mean *something!*

As to its actual dollar volume, that remains anybody's guess—you've seen so many estimates that you're probably groggy—until Dallas and San Francisco and Chicago and other cities likewise scare the operator into public avowal. As to quality, speaking either architecturally or socially—well, you know. Much of it is likely to stink; much, we sincerely hope, will be above average; a small portion may be great architecture. Maybe, that is, if the urge to get in on the ground floor doesn't overwhelm our collective sense of decency.

F. G. L.

THEY SAID—AND WE QUOTE:

Let us not criticise those individuals who speak up in meeting as to our civic needs or inadequacies, let us encourage the young architect to practise with imagination, devotion, and integrity. We must not permit ourselves to succumb to the minimums of codes and laws. Fine buildings are not built by designing down to their minimums, which are soon apt to become maximums.

Eugene Weston, Jr.
BULLETIN, *Southern California A.I.A.*

Without modern factories and commercial buildings, without improved means of transportation and communication, without up-to-date housing and farm buildings and utilities—in other words, without a large volume of construction, we cannot reach our postwar employment goal. To reach an output after the war of $2,600, in 1940 prices, of goods and services per worker employed, inevitably will require a very active construction market, probably surpassing any previous volume.

An expanding economy is a building economy!

Eric A. Johnson
President, United States Chamber of Commerce (To: National Association of Home Builders)

The reasonable gap of 15 to 20 percent between public housing and the usual private housing field leaves a "No Man's Land" which private capital is challenged to meet. . . . Instead of wasting time forever debating about submarginal markets, it is high time that private capital and industry do something constructive about the marginal market.

Philip M. Klutznick
Commissioner of FPHA (To: Citizens Housing Council, New York)

——UNQUOTE!

Views

(Continued from page 18)

NOTICES

HOWARD G. ELWELL, A.I.A., is opening a new office at 1520 Wilshire Blvd., Los Angeles 14, Calif. In 1942 he closed his offices in order to do war work with Fluor Corporation and the U. S. Rubber Company.

WILLIAM A. STONE, Architect, announces the reopening of his office for the practice of architecture at 1507 American National Bank Building, Kalamazoo, Mich.

ROBERT GRUEN ASSOCIATES, Designers have moved to 509 Madison Ave., New York 22, N. Y., from 30 East 55 St.

RICHARD V. TRUSDELL has joined the firm of G. McStay Jackson, Inc., Designers, of Chicago, as head of the design department.

SEBASTIAN J. TAURIELLO, A.I.A., A.D.I., announces the opening of a new office for the practice of architecture, interior and industrial design, project planning, and product development at the Jackson Building, 220 Delaware Ave., Buffalo 2, N. Y.

TO BE DISPOSED OF

Many copies of R.I.B.A. JOURNAL, PENCIL POINTS, DECORATORS' DIGEST, ARCHITECTURE will be given to anyone wishing to call for them or pay express. In addition, COLOURED HISTORICAL PLATES is offered for two dollars ($2.00) and Fletcher's ARCHITECTURE for six dollars ($6.00). Communicate with John L. Northam, 700 Sixth Ave., New Hyde Park, Long Island, N. Y., Tele.: Floral Park 5416-M.

JOBS AND MEN . . . . . .

Postwar Employment Service

MEN WANTED

DESIGNER - DRAFTSMAN — architecture and store interior work. State age, experience, personal qualifications. Permanent. Good opportunity. Box 114, PENCIL POINTS.

COMPETENT ARCHITECTURAL DRAFTSMAN wanted for small office with a general practice. Public and private postwar work. A long time connection assured to the man of demonstrated capacity. Edwin E. Valentine, 99 Miller Ave., Muskegon, Mich.

ARCHITECTURAL ENGINEER OR DRAFTSMAN for permanent position Research Department of midwest Steel Company. At least 5 years' experience general building construction. Resourcefulness, good draftsmanship more important than college degree. Write education, experience, salary, when available. Box 117, PENCIL POINTS.

SITUATIONS WANTED

CONSTRUCTION ENGINEER with engineering background, having charge of 5 of largest war plant jobs, 3 housing jobs. Was architect in New York. 15 years' industrial experience. Box 115, PENCIL POINTS.

ARCHITECTURAL ENGINEER, college graduate, Registered Architect (Illinois), age 29, desires connection with progressive office or corporation. Western location preferred. Wide experience in industrial work. Available immediately. Box 118, PENCIL POINTS.

EXPERIENCED ARCHITECTURAL DRAFTSMAN available for night work, Seattle, Wash. College degree and foreign service experience. Box 116, PENCIL POINTS.

News

Design and construction

Developments afield

Building Regulations

Related Professions

Products Progress

When architects, sculptors, landscape architects, painters, and others concerned with civic adornment were brought together by the Architectural League last month in New York—to discuss "war memorials"—verbal fireworks were to be expected.

Viewpoints ranged from that of Fiske Kimball, who was invited to contribute to the symposium his arguments for monumental works of art to honor war dead, to Joseph Hudnut's caustic attack on trite pomposities that "make our soldiers ridiculous." Robert Moses did not fail to send a statement encouraging "conventional monumental memorials if these are properly located and designed" though he did admit that he sympathizes with "people who believe that some war memorials should be in the form of endowments—chairs in colleges, beds in hospitals, prizes, research foundations, etc."

Having stated unequivocally in the May issue of PENCIL POINTS our editorial opinion in "Memorials? Yes—But No Monuments!" Kenneth Reid refrained from verbal tilting with those who for reasons of their own seem to resent memorials that might be useful or socially beneficent. It was his privilege, however, to read Dean Hudnut's statement which follows:

"When I remember the mawkish thousands of monuments which burden the towns and villages of our country, insulting the taste of the people, blurring the remembrance of our soldier dead, I wonder at the recklessness of anyone who, whether in the name of patriotism or of art, would increase that dreadful population by so much as a single increment.

"Is it possible then that the men of Guadalcanal and Anzio have need of this importunate and vain flattery? You will measure their sacrifice by a row of columns and a bronze angel? An inscription cut in granite will keep us from forgetting?

"Tell me: how many inches does the shaft of Trafalgar Square add to the stature of Nelson? How much more was Appomattox made glorious by the Riverside mausoleum of General Grant? How much more eloquent is Jefferson, now that you have him safely caged in his marble Pantheon?

"Do not imagine that these things are harmless. Monuments act; they exert a force; and their malice is unpitying. General Grant gallantly overcame his enemies but he will never overcome his monument; and the renown of Jefferson will be forever imprisoned in that round, appallingly permanent banality.

"Certainly our monuments do what they can to make our soldiers ridiculous. Yes, and to make our architecture ridiculous, also. Among the thousands that we have built not one is beautiful: well, yes, one—and that is on a field in Flanders, where even the Parthenon would be an impertinence.

"I do not know what our soldiers are fighting for if it is not to guard and nourish the spiritual energies of the people among whom they were born and among whom they hope to live. Surely then they are honored most by that which will promote that purpose. They are honored most by whatever will continue their devotion and clairvoyance.

"Why not then look into their hearts while they are still with us and learn what they would like to have us build? A green park, perhaps in a neighborhood now a waste of asphalt and brick; a playground where children now have only the streets; a schoolhouse to replace one long overtaken by the progress of the art and science of teaching; a music hall, a theater, a church accessible to all faiths. Why not illumine these, since we are architects, with that new purpose and hope which our men will surely draw from this, their present ordeal by fire? You may be sure that *they* will not ask for a monument."

An opposed viewpoint was ably presented by Paul P. Cret, chairman of A.I.A. War Memorials Committee, and creator of some of the most stately American battle monuments following World War I. In a statement prepared for the symposium, he chose to construe the growing sentiment for memorials of social value as mere dissatisfaction with the quality of the familiar banal memorials too often found in the average American city. He asked "why this attempt to cast ridicule on statuary because there are mediocre sculptors and committees with insufficient aesthetic education to select good ones, or because there are plenty of enterprising salesmen of bronze soldiers or cemetery monuments? It is permissible to feel that works of art are more likely to recall to our descendants the deeds of their ancestors than swimming pools, memorial trees, or recreation centers, whatever merit they have on other grounds."

Speaking for the sculptors, Paul Manship, as acting president of National Sculpture Society, confidently promised that if communities wishing to erect war memorials demanded great things of sculptors, the sculptors would demand great things of themselves.

It is no news that there is a paper shortage—and that it will be even more acute next year.

By thrifty planning of paper use and careful attention to the number of copies printed each month, PENCIL POINTS has in the past year been able to meet all usual demands for the magazine even though there has been a sizable increase in the number of readers. But it is now necessary for us to announce, with regret, an emergency policy to conserve our paper allotment for the benefit of the architectural profession.

The first obligation of PENCIL POINTS is to professional readers—the architects, engineers, designers, draftsmen, specification writers, and architectural students of the country. To continue serving these, PENCIL POINTS intends to print its accustomed number of editorial pages each month. From this date however we must reject any subscriptions from other than professional sources. Any subscription accepted from a non-professional reader means serving one less professional reader. The only exceptions are men in the armed forces and libraries.

Formation of the American Chapter for Relief and Postwar Planning of C.I.A.M. (International Congress for Modern Architecture) has been announced by Richard J. Neutra of Los Angeles, president of the group.

Famed architects and planners eager to encourage advanced techniques in the construction of new cities, communities, and rebuilding projects are associated in the new chapter. There are plans to co-operate with our federal agencies, in work for various governments abroad, and the chapter also will establish contacts with foreign governments and with the 18 C.I.A.M. groups already in existence abroad. All this is in the hope "that the tremendous work of world-wide reconstruction can be carried on without cessation and errors," Mr. Neutra explained.

Headquarters of the chapter are in The New School for Social Research, 66 West 12th Street, New York 11, N. Y., which thus becomes the American center for coordination with the stimulating program of C.I.A.M. The international organization has operated from headquarters in Switzerland since 1928.

Requests have already been received for data on new American products and techniques, indicating interest among foreign authorities in the technological advances made in this country while other lands have been ravaged by the war. Mr. Neutra explained that a major activity of the American Chapter for Relief and Post-War Planning of C.I.A.M. will therefore be to collect, digest, translate, and forward to foreign governments and C.I.A.M. groups the latest information about American planning, building methods, systems of prefabrication, and materials (including catalogs of manufacturers). The chapter also will establish contacts with technical consultants here and will work for the adoption of advanced planning standards for temporary as well as permanent construction.

Other officers of the chapter are: Jose Luis Sert, city planner and author of "Can Our Cities Survive?"; Paul Nelson, Director of Urban Studies for the French Government; K. Lonberg Holm, Director of Research, F. W. Dodge Corporation—vice presidents; Harwell H. Harris, Los Angeles architect, secretary-treasurer; Stamo Papadaki, C.I.A.M. Greek delegate, acting secretary.

Rudolph Weaver, F.A.I.A.
1880-1944

Rudolph Weaver, founder and director of the School of Architecture and Allied Arts, University of Florida, and Architect to the Florida Board of Control since 1925, died November 10 of coronary thrombosis. He was stricken the afternoon before in his office at Gainesville. He is survived by Mrs. Weaver.

Director Weaver will be remembered as a vigorous champion of the rights and interests of the architectural profession. For two decades he was active as a member and officer of the A.I.A.; he participated boldly in civic and university affairs in order to advance the profession's aims; as head of a growing professional school he skillfully used his prestige to stimulate advancement of professional standards. A.I.A. members throughout the country will recall his service as director, South Atlantic District, 1939 to 1942, and as chairman of the A.I.A. Judiciary Committee for the same years.

A native of Roxbury Borough, Pa. (now Johnstown), he studied architecture at Drexel Institute, Columbia University, and Atelier Hornbostle, later working for two years as a draftsman and designer before taking his first position as an architectural instructor, at the University of Illinois, in 1909. In a short time he became known as a college architect and was soon head of the Department of Architecture of the State College of Washington, where he also designed various college structures. After a similar dual role at the University of Idaho, for two years, he received his state appointment in Florida, where since 1925 he has designed numerous educational structures and prepared comprehensive campus plans for the University of Florida, the Florida State College for Women, the Florida School for the Deaf and the Blind, the A. & M. College, and the Experiment Stations. He was also chairman of the Gainesville City Plan Board, and active in civic and cultural organizations. After establishing the School of Architecture at the University of Florida in 1925, Director Weaver instituted and integrated the "Project Method" of instruction for the architectural students —pedagogical pioneering since rewarded by the professional successes of a number of the graduates of the school.

Clinton Lee Harris
1886-1944

Professor Clinton Lee Harris, a member of the Department of Architecture at Pennsylvania State College for 31 years, died suddenly at his home in State College, November 15. He is survived by Mrs. Harris and a son, Major Rhett Harris, now serving with the Army in the South Pacific.

As a registered professional engineer and registered architect in Pennsylvania, Professor Harris was a member of a number of professional and honorary organizations.

A vast lot of propaganda has been circulated against the old-fashioned big kitchen—finally to be answered by an editorial writer in a recent issue of the NEW YORK HERALD TRIBUNE under the title, "Father of the Kitchenette."

"If the late Andrew J. Kerwin, real estate operator, really was the designer of the first kitchenette (and it appears that he had a good claim to this distinction), then he surely was of the first importance in the history of our society. As such, he has much to answer for, and he must likewise take his share of the blame. A kitchenette is better than nothing; maybe it helped make claustrophobia more bearable. And maybe it was absolutely necessary in the modern scheme of things. And yet, as a matter of long-range, immutable policy, and that goes for the postwar world as well, we are all on the side of the big, old-fashioned kitchen. A vast lot of propaganda has been put out in recent years against the big kitchen—how it was inefficient, how it wasted millions of steps in the course of a lifetime, and so on. Most of this stuff has left us skeptical; it sounded too much like the feeble defense of some one with a guilty conscience. We desire to take nothing away from Mr. Kerwin, whose innovation ranks with the zipper, the one-way street, the two-way stretch and a hundred other devices. Let him have the glory, if that's what it is. We still like the big kitchen."

Value of art to men leaving the armed services, as a "way back" to civilian pursuits and pleasures, is being tested by the Museum of Modern Art at a War Veterans Art Center recently established in New York.

Men who have served in the Army, Navy, Marine Corps, and Merchant Marine of the United States are eligible to join day or evening classes being conducted under supervision of Victor D'Amico, of the museum staff. For men seeking recreation or further professional training that will help them to better positions in the various fields of applied arts and crafts, 10 accomplished professional artists and craftsmen have been assembled as teachers.

Results are already encouraging. Men who attended classes during the summer in an experimental art center first set up by the museum were enthusiastic and in some cases the classes have served to quiet battle-strained nerves. Each veteran is interviewed when he applies to join the Art Center—so that abilities of beginners can be discovered and vocational skills of all can be intelligently guided.

Award of the 13th annual Hamlin Prize in Social Architecture to Elizabeth Hird, senior at Columbia University School of Architecture, has been announced by Dean Leopold Arnaud.

The problem for the current Hamlin competition was design of a memorial wall for the recreation room of the community building in a Federal housing development—dedicated to members of the community who have served in the armed forces.

News

A $385 million civic improvement program for Philadelphia has been recommended by the City Planning Commission.

The program calls for 1,108 projects, among them: sewage treatment and collection, waterworks rehabilitation, city-state highway construction, flood relief, highway bridges, 12 or more public schools. It is to cover the 6 years following the end of the war and is estimated to provide 120 million manhours of work.

Establishment of basic standards for glued laminated lumber products has been undertaken by the Bureau of Standards.

At the request of the National Lumber Manufacturers Association, an effort to standardize glued laminated lumber products is being made under auspices of the Lumber Standards Committee appointed by the Department of Commerce. Development of glued laminated techniques which had been advanced in the past decade is now greatly accelerated by war needs. Glued laminated lumber and its products are being manufactured in substantial commercial volume for common applications such as: arches and other structural members; panels and coverings for buildings; new work and furniture. When standards are established, the designer and ultimate consumer will be offered a guide in selecting products for specific uses.

The future of plastics in the building field was the general subject of a meeting of architectural and production representatives last month in New York.

The forum was sponsored by the Technical Committee of New York Chapter A.I.A. and the Society of the Plastics Industry. Arthur Holden, president of New York Chapter, and George K. Scribner, S.P.I. president, served as chairmen at the sessions. Morris Sanders represented the A.I.A. Technical Committee and C. W. Blount, Bakelite Corporation, represented S.P.I. as moderators for the two groups participating.

Stephen F. Voorhees, of Voorhees, Walker, Foley & Smith, is chairman of a committee of prominent New York architects to solicit more than 150 architectural firms in Manhattan for subscriptions to the Sixth War Loan.

Other members of the committee, which will represent the Architects' Division of the Building Section, Commerce and Industry, War Finance Committee for New York, are: Matthew W. DelGaudio, Alfred Fellheimer, Frederick Frost, Sr., Alfred Geiffert, Jr., A. L. Harmon, Daniel P. Higgins, E. J. Kahn, Jacob Moscowitz, R. E. O'Connor, and H. S. Waterbury.

News

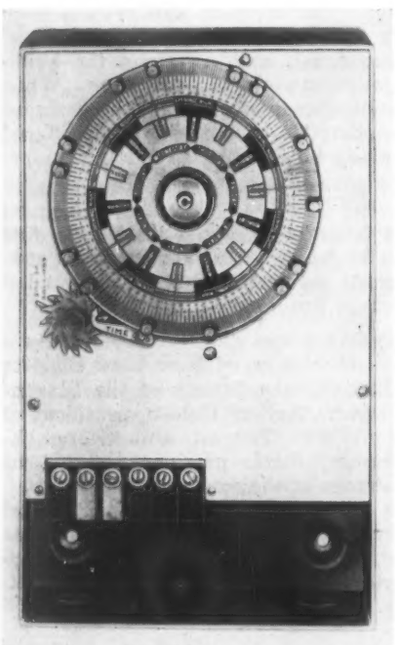
Products Progress

Floor and Roof Slab

A hollow-cast floor and roof slab called "Flexicore" has been introduced with little notice and extensively used to meet wartime needs. It is a long-span, precast, hollow-cast concrete slab presenting a level surface above for roofing or any type of wood or composition floor covering; the underside smooth and ready for painting. Because there is no waiting for the curing of concrete, time can be saved in immediate installation of utility or floors. Price Bros. Co., Dayton 3, Ohio.

Time Switch

For timing automatic heat, ventilating, lighting, pumping, or flushing operations, the "Paragon 700 Series" dial time switch unit is equipped with 6" calendar dials which make one complete revolution every 7 days. Dial trippers



can be independently set for different daily "on" and "off" schedules; setting can be made in advance for a week; operations for any day or days may be omitted entirely on a pre-set program; operations from "on" to "off" may be set as close as three hours apart, and can be separately adjusted throughout each 24-hour day in the week; each day of the week is graduated into hours and half hours; day and night schedules are distinctly separated. Paragon Electric Co., 39 West Van Buren Street, Chicago 5, Ill.

Rolled Aluminum Shapes

Special rolled structural shapes of aluminum, with cross sections as large as 30 sq. in., weighing as much as 1,200 lbs. per piece, have been man-hour savers in assembling bomber planes during the war. This war-born development is now predicted as opening new realms of design for post-war projects because these shapes have the advantage of long lengths, requiring fewer joints and resulting in less dead weight and faster assembly. Aluminum gives lightness, sturdiness, is corrosion-resistant, and easy to fabricate. Shapes are tailored to suit stresses and other requirements. Aluminum Co. of America, Pittsburgh, Pa.

Calculator for Plywood

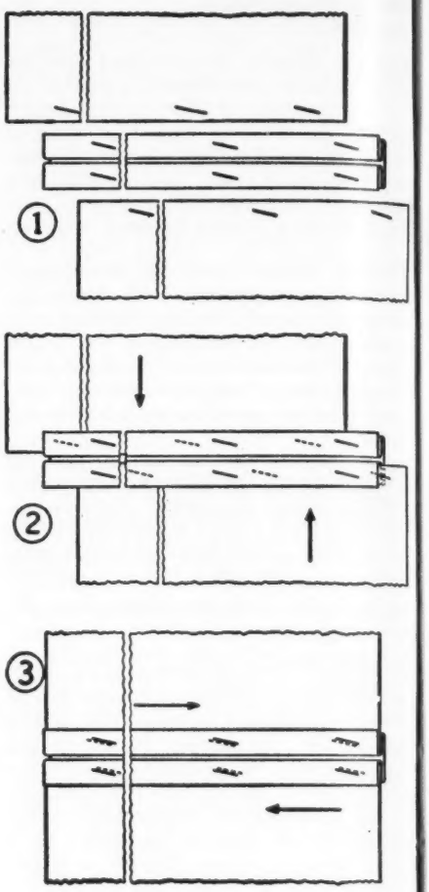
The amount and size of plywood, studs and wales needed for any given plywood concrete form, may now be estimated by means of a new "Keely Plyform Calculator," designed by Hal Keely, president of the National Plywood Distributors' Association, Inc., 111 West Washington Street, Chicago 2, Ill. Given the rate of pour, whether vibrated or unvibrated, and the height, length, and thickness of the wall to be built, it is claimed that an accurate estimate of the material needed to construct the forms may be arrived at in one setting of this slide rule device.

Plastic Floor Coating

A new, non-slip, fireproof, plastic floor coating (available in color) may be put down over old wood, concrete, or steel floors, according to the manufacturers, Miracle Adhesives Corporation, 801 Second Avenue, New York, N. Y. A war-developed product, it has been proved in use for gun platforms, stair treads, engine-room floors, and other ship and tank areas; for glider floors, step plates on planes, ramps, and wing walks. Now released for civilian construction, it has already been installed in foundries, oil plants, dairies, bakeries, trains, stairways, residence steps, cellar floors, etc. It is claimed that the coating can be put down at the close of plant operations one night and walked upon the following morning.

Fireplace Grate

Homemakers facing fuel restrictions may find relief with the new "Vertigrate," a cast iron fireplace grate with a heat-refracting lining on the back and sides. It is equipped with top doors for easy fueling and a rocker shaker for cleaning ashes; its unusual height and minimum depth create a vertical firebed which is said to reflect from 3 to 8 times more heat directly into the room and to cut down the usual heat loss up the chimney. It is also claimed that one refueling in 12 hours will be sufficient to keep this miniature furnace burning. It is safe to burn day and night, even when the household is asleep. Centre Brass Works, Inc., 2323 Haviland Avenue, New York 61, N. Y.



Strip for Connecting Sheet Metal

A new strip for connecting sheet metal, readily assembled and taken apart, yet designed to hold as securely as bolts, rivets, or screws, will be manufactured by the Sheetlock Co., 4529-31 North Clark Street, Chicago 40, Ill. It is a double channel with indented louvers or notches spaced uniformly at a 12-degree angle along the sides of the strip. Protruded louvers along the edge of the sheets are spaced and angled to fit the strip (Fig. 1). Sheets are pushed into the channel (Fig. 2) and slid parallel to the strip until the louvers engage, forming a wedged lock (Fig. 3). By reversing the procedure, the sheets can be available flat for straight connections, and angled for corner connections. It is predicted as a labor saver which will also simplify knock-down shipments.

Cure for Condensation and Wet Walls

A metal-foiled gypsum lath has been found to be an effective cure for condensation troubles in exterior walls, says Gypsum Association, 43 East Ohio Street, Chicago 11, Ill. To the gypsum lath used as a base for the interior plaster (placed against the inside of the studs just under the interior plaster) is added the metal foil, against the studs. Tests prove that the metal foil, placed in this position, prevents the room air moisture from passing through to the exterior wall space, where it could condense—especially in cold weather—and cause wet walls that might damage decoration or furnishings.

Pencil Points
PROGRESSIVE ARCHITECTURE

Standards Of Practice

A small tempest has blown up as a result of a statement about "the Landscape Architect" which formed an incidental part of a contribution to our "Views" column in October. A.S.L.A. members by the dozen have written us in protest. We grasp the opportunity to clear up two things—things that should already have been clear to most readers of this magazine who are familiar with its attitudes. The first point is that reader opinion, printed under "Views" in the interests of free speech, does not in any way represent the opinions of the editors except when clearly so stated. The second is that PENCIL POINTS and its editors have always recognized the professional landscape architect as on a par ethically with the professional architect. Having, we hope, settled that, we can turn to the real culprit—who is neither ourselves nor our incautious contributor, but the public and professional laxity that permits unscrupulous and inferior services to be offered without challenge.

All professions, unfortunately, have a fringe of substandard practitioners. There are quack doctors and shyster lawyers and there are similar chiselers calling themselves "architects" or "landscape architects." The reputable majority in each case recognizes and assumes its public responsibility to combat this fringe. The A.I.A., which represents Architecture, has succeeded in most states in at least partially protecting the public against wrongful use of the title "Architect." Is it not time that the same protection should be fought for and won in the case of the term "Landscape Architect"?

Right now, as we stand on the verge of a tremendous era of construction and reconstruction, it is perhaps a good moment for all professions to strengthen their professional standards. A little later on, when every one will be pretty completely occupied with the details of performing the work that comes his way, there will be less time to think about proper safeguards.

We urge, therefore, that each professional society, locally as well as nationally, take steps now not only to keep its own membership in line but to inform the public of the risks it runs when it is lured into the clutches of incompetents or rascals. The remedy for existing malpractices is not to protest when they are mentioned openly but to see to it that they are tracked down and exposed.

Kenneth Reid

Elmer Astleford Photos

REORGANIZED CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS

Alden B. Dow, A. I. A., Architect

Midland, Michigan, has a new house of worship, a church designed in an humble spirit by a remarkable architect-client group. The building committee of the congregation expressed to Alden Dow a desire for a church to suit their particular requirements. To quote him: "Grouped around the drafting board, we designed the church as it is today, each member contributing his share." The congregation also did most of the actual construction; and the result of their labors under inspired architectural guidance has no forbidding *Sundays Only* look; it is an inviting yet dignified building, usable seven days a week. In it is achieved a goal more often eulogized than won: the total blending of spiritual and physical characteristics.

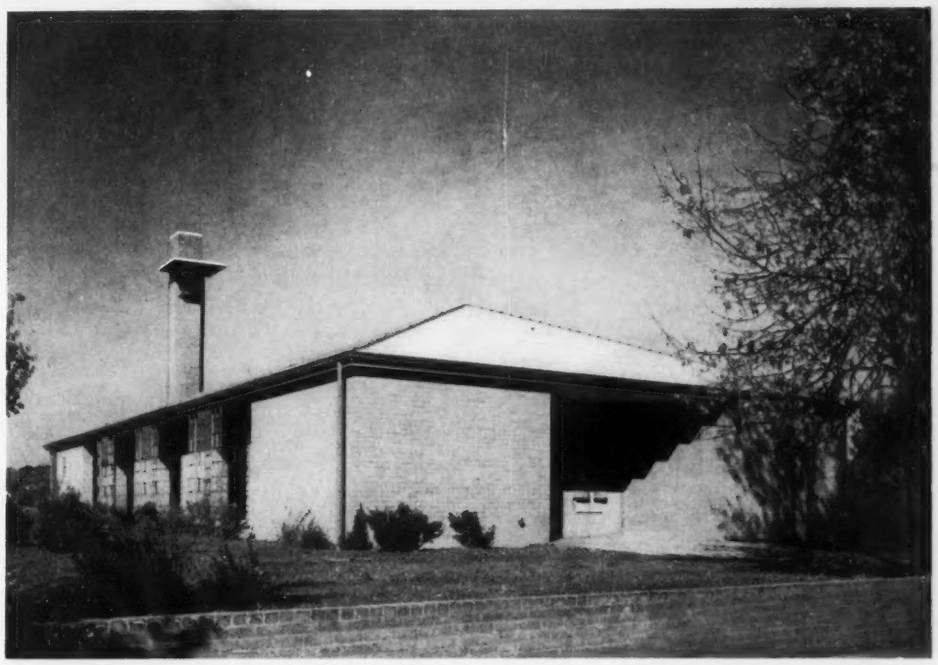
Parts remain for the congregation to finish: six caps at entrance set-backs; decoration of small panes in the bay windows; installation of a loudspeaker, to broadcast music rather than bell notes, in the recess in the chimney.

Set determinants guided the church's design: space in which to seat comfortably about 300 people; a raised platform suitable for church meetings yet easily convertible into a stage for small dramatizations; a recognition of nature as an important part of the creed; facilities for community and social activities as well as worship; and such worldly requirements as sufficient parking space and the need for staying within a limited budget.

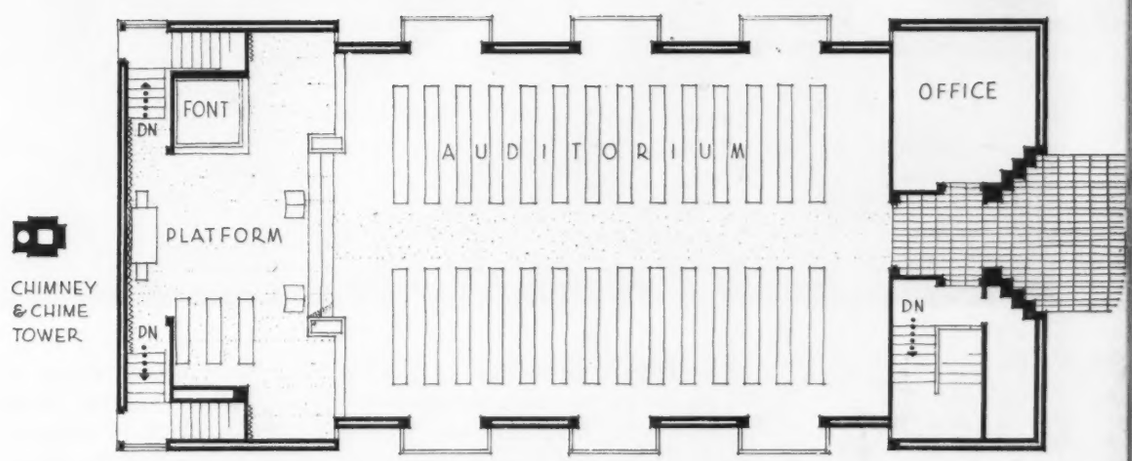
Located on Ashman Street in Midland, the church is in a neighborhood which is fast becoming commercial. All the more appealing, then, are the gardens which surround it; quiet, informal, much like old English flower gardens, they are pleasantly conspicuous. The plot is approximately 100 by 300 feet in size, and provides adequate automobile parking space in the rear of the building.

When the design had reached the sketch stage, the committee presented it to the local membership, and after winning their enthusiastic endorsement, informed their head officials and sent in the sketches to obtain their approval to build. Thereupon, as the architect puts it: "the officials immediately came to Midland and met with me and the building committee. I think they were afraid that the architect was trying to sell the building committee something different just for the sake of being different; but after we explained the philosophy of the building they were as enthusiastic as we, and immediately approved the plans."

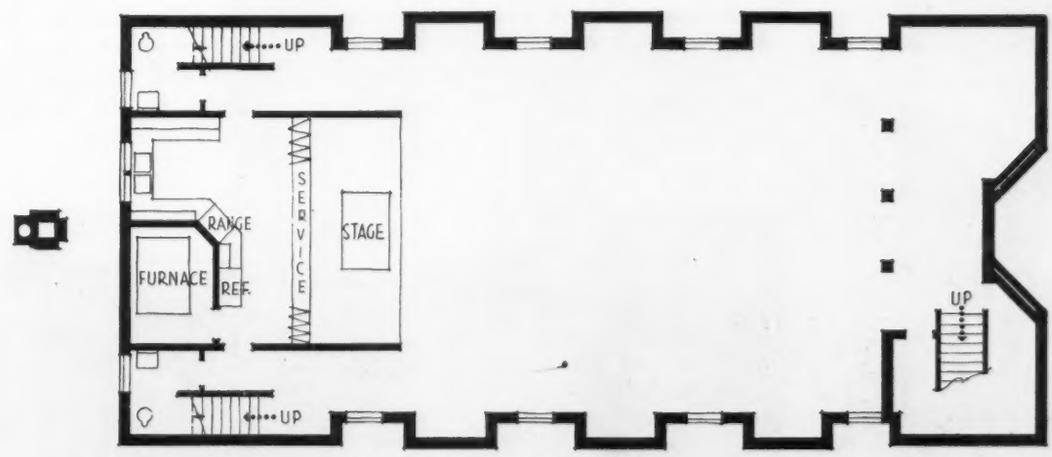
Alden Dow gives as reasons for the success of the church, first, the intense enthusiasm of the congregation (as many as 30 members at a time, all working, participated in its construction) and, second, the fact that it is not completed: the sculptured caps (cast concrete) at the entrance, each to be done by an individual member of the parish, will eventually tell the story of their faith. Square panes in the windows will be treated similarly, different bays being assigned to different groups. The flower gardens need continued attention. When the basement was usable, before the main auditorium was completed, services were held below stairs. By such simple means is enduring interest assured, while the building grows to a gracious climax.



ALDEN B. DOW, Architect



GROUND FLOOR

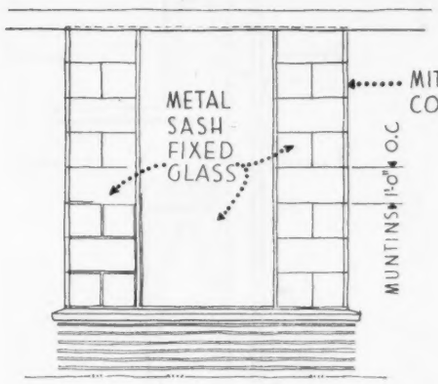


BASEMENT PLAN

0 5 10 15 FT.

First floor is an auditorium and necessary appurtenances—including an office which, incidentally, seems the one poorly lighted space in the building. Space below stairs is used for study groups, recreation, dinner gatherings, musical and dramatic productions. Walls above grade are of common brick inside and out, built in the hollow-wall fashion more common abroad than here, in order to reduce penetration of cold and moisture.

In such elements as the door-pulls, above, and the windows, shown in detail on the facing page, the honesty of the building appears. Solid, straightforward oak, naturally finished; common brick in common bond; clear glass set in a fashion borrowed from store-front practice, with no corner mullions to obscure vision; stock steel shapes for the sash—these are used without the pretense which has made so much of our contemporary church design meretricious. The building is roofed with white asbestos shingles which, in addition to keeping out the weather, reflect much of the summer sun's heat; and which, after eighteen months of service, remain brighter than the sky to the camera lens.



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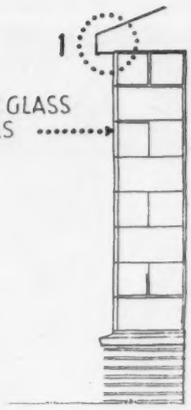

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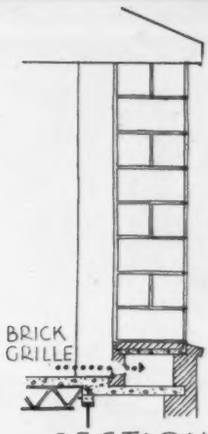
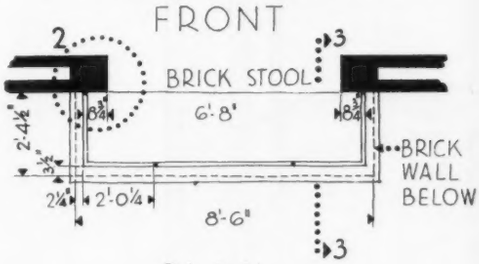
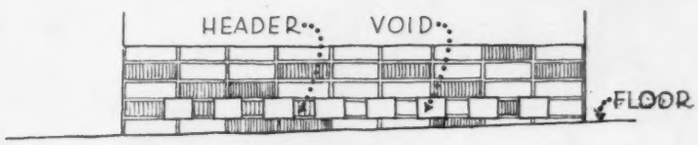


SECTION · 3-3

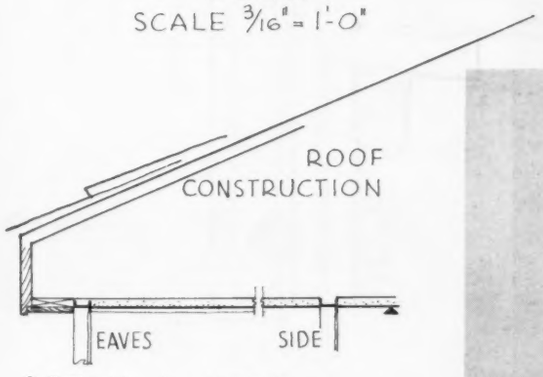


PLAN
SCALE 3/16" = 1'-0"

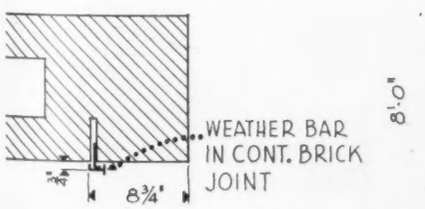


ELEVATION SHOWING BRICK GRILLES FOR RETURN AIR BELOW WINDOWS SCALE 3/8"-1'-0

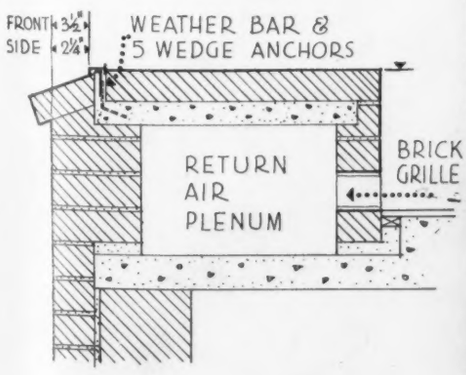
WINDOW DETAILS



DETAIL 1 • HEAD

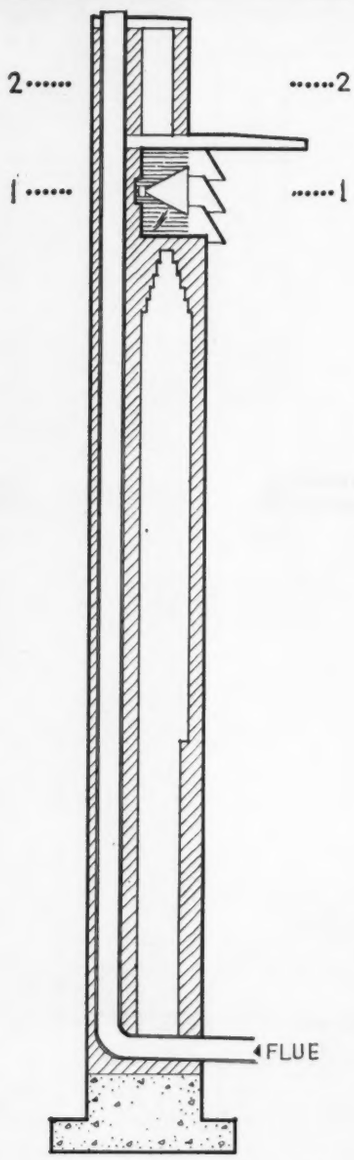


DETAIL 2 • JAMB

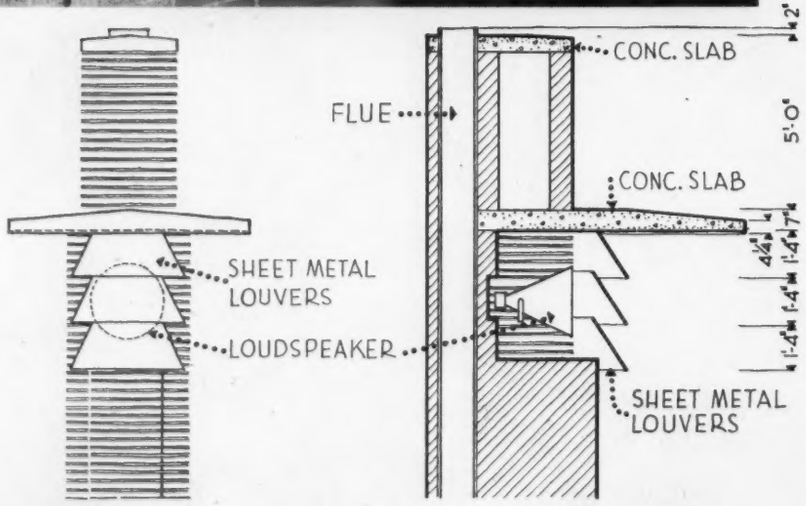


SILL SCALE 3/4"-1'-0

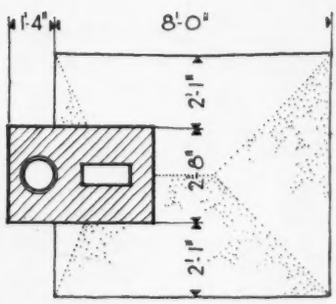
Reorganized Church of Jesus Christ of Latter Day Saints
. . . . . Alden B. Dow, A. I. A., Arch. . Chimney and Music Tower



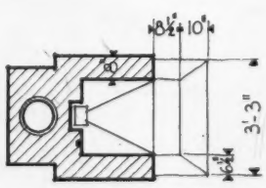
SECTION 1/8"=1'-0



DET. ELEVATION 3/16"=1'-0" DET. SECTION



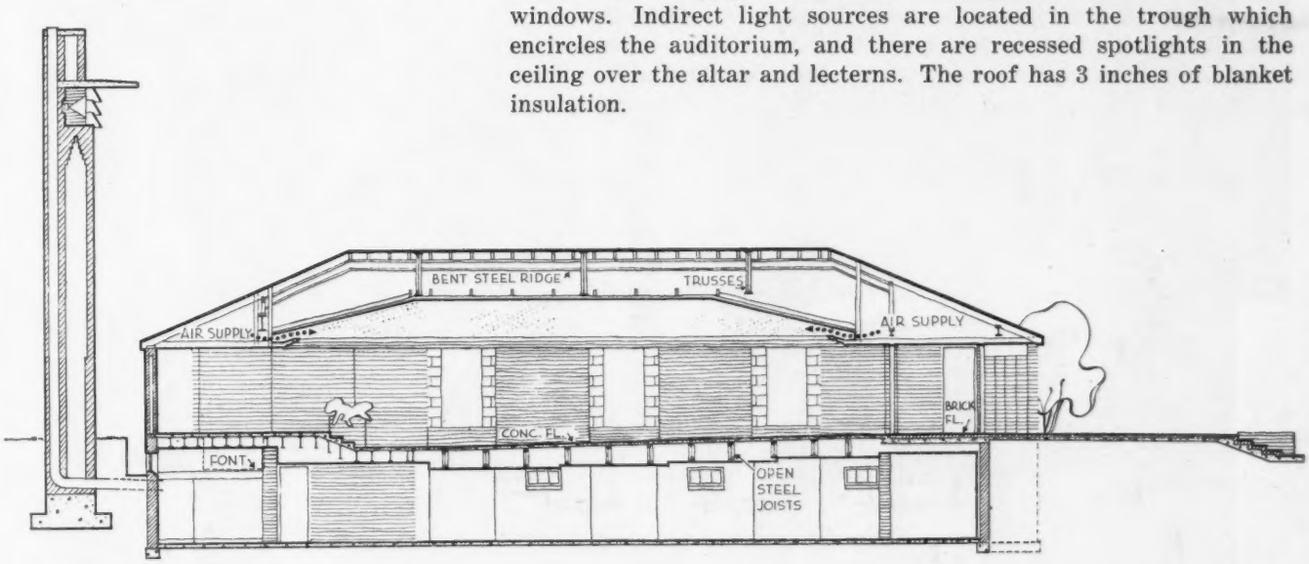
PLAN 2-2



PLAN 1-1 3/16"=1'-0"

The interior of the church, like the exterior, is at once unpretentious and dignified. The exposed brick walls carry lightweight steel members which support the roof and ceiling. The concrete floor, covered with mastic tile, is also supported on lightweight steel joists, and slopes down toward the platform. Here, too, work remains to be done. The plasterboard ceiling, at present exposed, is eventually to be partially covered with acoustic plaster, partially with fabric held in place by small wood battens which will form a decorative pattern.

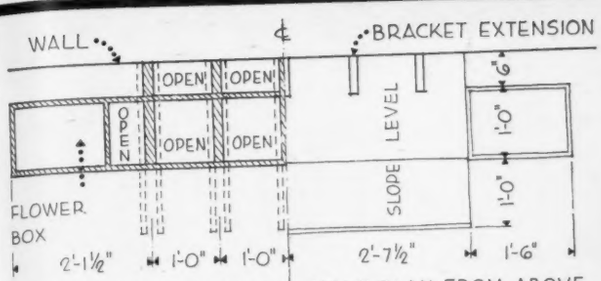
The building is heated by a forced-air gas-fired furnace, with galvanized iron supply ducts in the ceiling and returns under the windows. Indirect light sources are located in the trough which encircles the auditorium, and there are recessed spotlights in the ceiling over the altar and lecterns. The roof has 3 inches of blanket insulation.

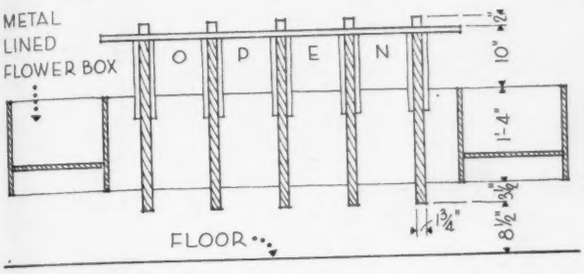


LONGITUDINAL SECTION

0 5 10 15 FT.

Since nature plays such an important role in the church's philosophy, built-in plant containers flank the platform and the altar on its rear wall. Lecterns—to quote again—"designed to inspire any man behind them to lecture," are of naturally finished light oak, as are all furniture and wood trim. Choir pews, lecterns, and altar and cross (the latter two suspended on the wall) are portable, easily cleared away when necessary for dramatic presentations. Draperies on the altar wall were installed by members of the parish.





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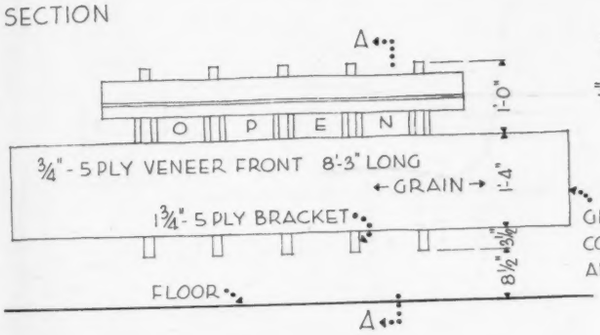

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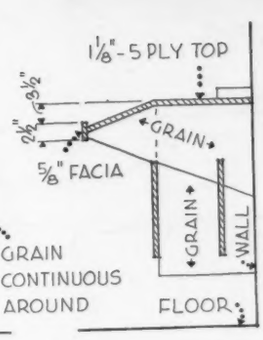
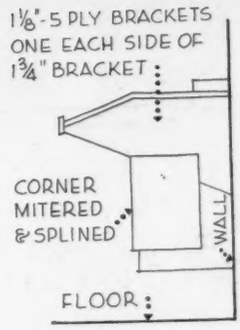


SECTION A-A



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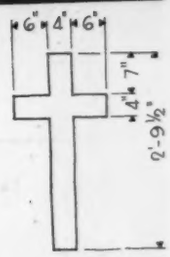
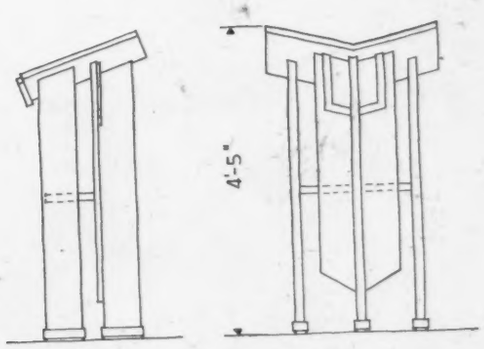
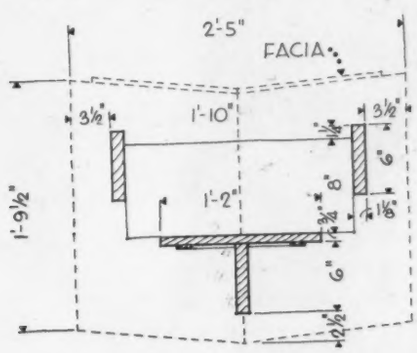


CROSS

ALTAR DETAILS SCALE: ⅜"=1'-0"

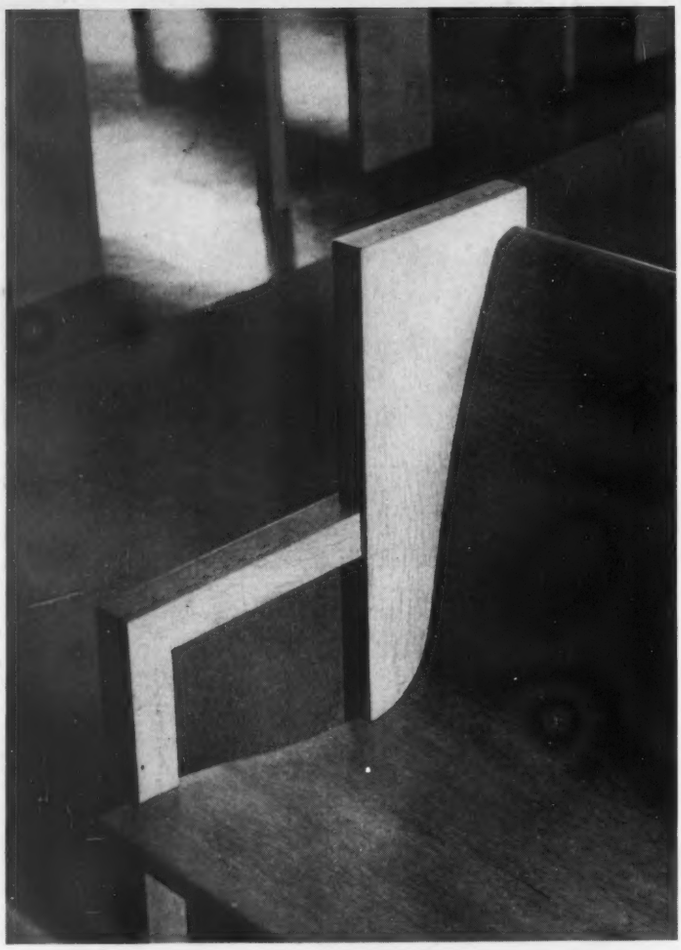


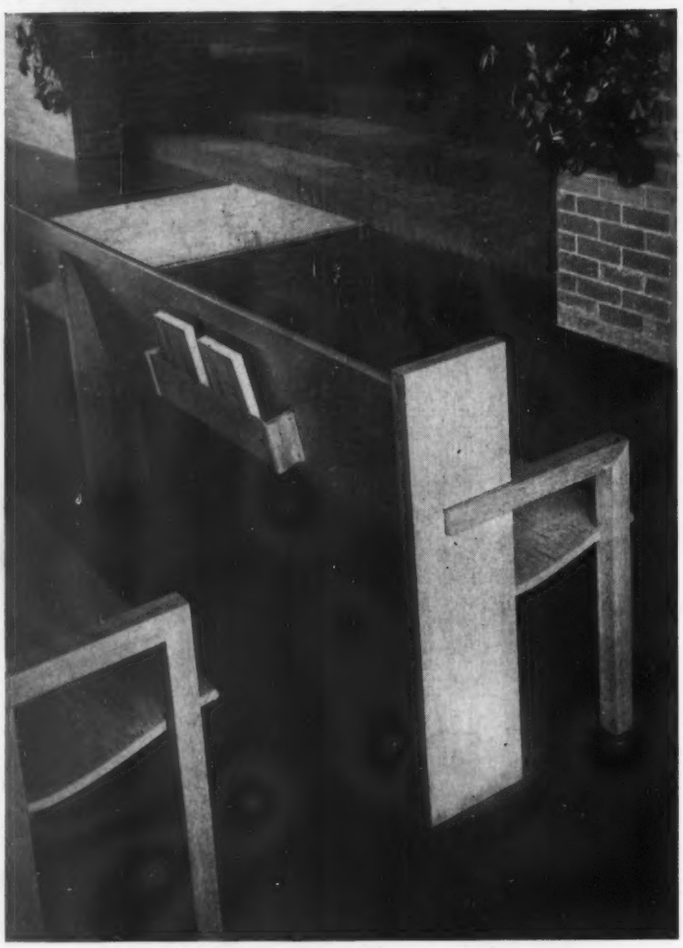
SIDE SCALE: ⅜"=1'-0" FRONT

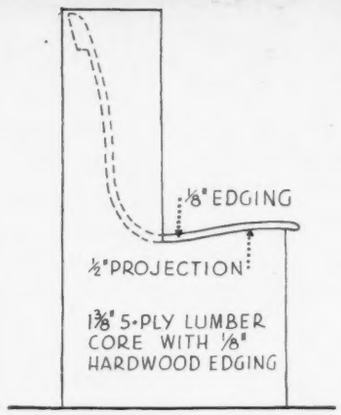


PLAN SCALE: ¾"=1'-0"

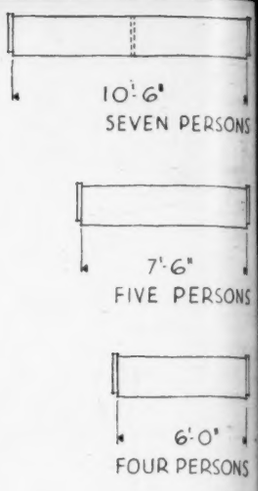
DETAILS OF LECTERN

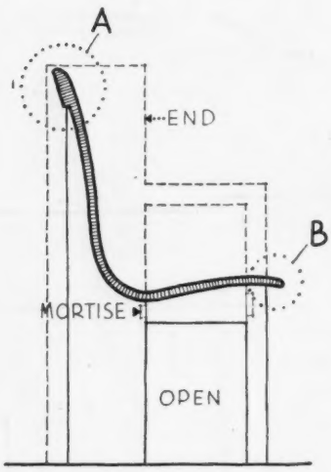






ENDS OF CHOIR PEWS

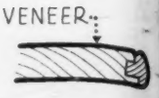




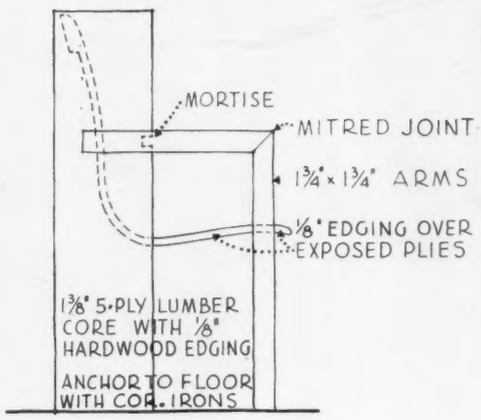
CENTER SUPPORT
AUDITORIUM PEWS

DET. A
3" = 1'-0"

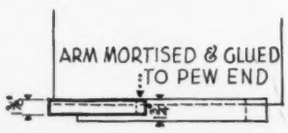
7 PLY VENEER



DET. B
3" = 1'-0"


MORTISE
MITRED JOINT
1¾" x 1¾" ARMS
⅛" EDGING OVER EXPOSED PLIES
1⅜" 5-PLY LUMBER CORE WITH ⅛" HARDWOOD EDGING
ANCHOR TO FLOOR WITH COR.-IRONS

END OF AUDITORIUM PEWS



PLAN AT END OF PEW

PEW DETAILS SCALE - ¾" = 1'-0"

The windows, seen from inside, tell the story of this remarkable small church perhaps better than any other view. The close relationship between outdoors and in; the simplicity of natural materials which unashamedly abut one another; the vase of flowers; and above all the expanse of clear glass, whose clarity will be enhanced rather than obscured by later decoration in the small, square panes, combine to make the building as pleasantly contemporary in spiritual feeling as it is in more mundane characteristics. Its esthetic satisfaction grows out of its practical success; and if it shows a slighter relationship than most of Dow's published work to the Frank Lloyd Wright tradition, yet it displays a fine appreciation of the common virtues. It passes with honors a most difficult architectural test when it achieves success without great financial outlay, without ornament, even without being "completed."

ALDEN B. DOW,
Architect

REMARKS BY
THE PASTOR,
MERLE E. HOWARD

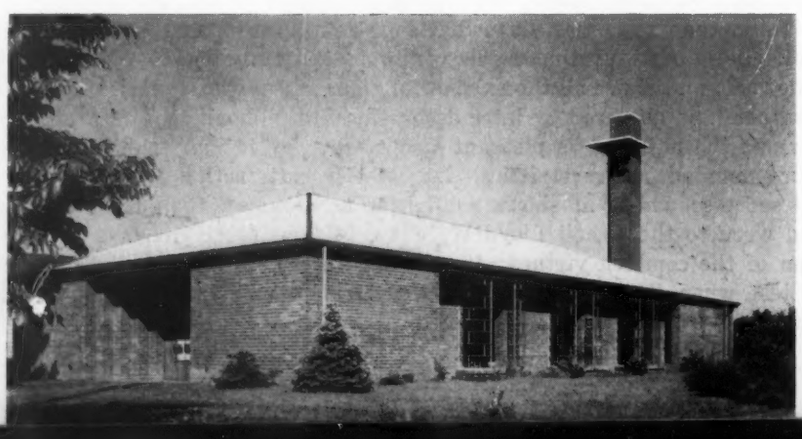
"The church building is quite naturally planned around the main auditorium, and it is very important that this be true. The auditorium should be a place of quiet, a place of rest, so designed and decorated as to provoke reverence, meditation, and prayer. If this is to be the case, it must have simple beauty first of all. It must not be dark and gloomy but yet must not be too brightly lighted. We find God best in the great outdoors—in nature; so the more natural the interior of the church, the more worshipful it will be. The message of Christ was the natural way of life, the simple way of life; so in erecting places of worship we should choose the natural and the simple.

"The place of worship should have good acoustics, an unobstructed view of the altar, and should be comfortably ventilated and heated. Yet this building should be more than just a good auditorium. It should have facilities to meet the needs of character building in every age group. It should have facilities for worship, study groups, recreation, social activities, dinner gatherings, dramatic and musical productions. The church should be so built as to meet the needs of its every member, their needs in worship, work, and for leisure time.

"You have asked me to comment on the building designed for us by Mr. Dow. Our building has been in use for approximately eighteen months and we find it very satisfactory in every way. It is very well adapted for the small congregation (we have 275 members) in that it offers the maximum in the use of space for the minimum of building costs. The worshipful setting of the upper auditorium could not be excelled. Yet it is adaptable to dramatic productions. The sloping floor makes it possible for all to see the altar. The acoustics are very good; even when little children sing or speak in special programs they are easily heard. From the pulpit, a normal speaking voice is all that is needed.

"The lower auditorium can be adapted for use as a worship chapel, church school class rooms, dining hall, recreation room, and for social activities. The lighting throughout the building is very efficient in that it gives all the light that is needed and yet the light is soft enough to help create the atmosphere needed in a church.

"My one adverse criticism of the building concerns the heating and ventilation. It might be made easier to get enough fresh air into the building, and it is something of a problem to get both auditoriums to the proper temperature at the same time. For all that, I like the building so much that I would be very happy indeed if I could always have one similar to it wherever I might go as Pastor."



PROGRAM

For the Design of A House *for Cheerful Living*

PENCIL POINTS "PITTSBURGH" ARCHITECTURAL COMPETITION

THE PRIZES

First Prize	$ 2,500.00
Second Prize	1,500.00
Third Prize	1,000.00
Fourth Prize	500.00
25 Mentions at $100 each .	2,500.00
8 Special Prizes at $250 each for details showing intelligent use of glass on the interior	2,000.00
TOTAL	$10,000.00

The sponsor may, in addition, purchase any of the unpremiated designs for $100. each.

All parties to this competition agree that the Jury of Award has authority to make the awards and that its decisions shall be final.

THE JUDGES

Pietro Belluschi,
A.I.A. Portland, Ore.
Ralph Flewelling,
A.I.A. Los Angeles, Cal.
J. Byers Hays,
A.I.A. Cleveland, Ohio
Robert M. Little,
A.I.A. Miami, Fla.
Louis Skidmore,
A.I.A. New York
Hugh A. Stubbins, Jr.
Boston, Mass.
Philip Will, Jr.
A.I.A. Chicago, Ill.

Authorized by
Reinhold Publishing Corporation

Sponsored by
Pittsburgh Plate Glass Company and
Pittsburgh Corning Corporation

Conducted by Kenneth Reid, A.I.A.,
Professional Adviser

THIS competition is open to all architects, architectural draftsmen, and architectural students. Under a ruling by the American Institute of Architects Committee on Competitions, Institute members are permitted to enter this competition. Contestants may submit more than one design. No employee of either Reinhold Publishing Corporation or the sponsors is eligible.

COMPETITION CLOSES AT 6 P.M., MONDAY, FEBRUARY 26, 1945

PENCIL POINTS

"PITTSBURGH"

ARCHITECTURAL

COMPETITION

Preamble

PENCIL POINTS, which has in past years run many successful educational architectural competitions, presents again a challenge to the ingenuity of the American architectural designer. The objectives are first to bring up to date, in line with recent technical advances, the general understanding of the ever-present problem of planning the small homes of the Nation; and second, to discover and give recognition to new design talent among the thousands of architectural men, young and old, who will soon be called upon to give form to the future physical environment of our people.

We have a theory, expressed from time to time in these pages, that there is developing among contemporary architects a clearer and more straightforward philosophical approach to design than was generally the case fifteen or twenty years ago. This will lead, we think, to a higher average of architectural excellence in the homes to be built during the years that lie ahead. It is our hope, shared by the sponsors of this competition, that the designs submitted for consideration by the Judges will be many and varied and that, subject to the discipline of good taste and sound realism, they will represent the best thinking that can be brought to bear on the problem by the American architects of today.

Problem

MANDATORY. The design of a house in which an average young American family in an average suburban residential community can make its permanent home in a world at peace. The client, an average fellow who may as well be called "G.I. Joe," is a man in his early thirties who has served in the armed forces of his country during the war. His wife has done her part by working in a munitions plant, while their two children—a boy of ten and a girl of six—have been farmed out with the grandparents. The assumption is to be made by competitors that the war is finally over and that the reunited family is determined to have its own home. Joe has got his old job back and his employer, pleased to have him, has plans for his promotion. A respectable accumulation of war bonds plus a loan from a local bank under the terms of the G. I. Bill of Rights makes the fulfilment of the family ambition possible; so Joe takes the first step and looks up a good architect.

A reasonably priced quarter-acre plot in a newly subdivided, fairly level area is decided upon as the site for the new home. This lot is roughly rectangular with a frontage of 75 feet along the southerly side of a paved street running southeast-northwest. It is 140 feet deep to the rear property line where it adjoins a neighbor's lot on the next street. A local restriction says that no building may be placed nearer than 30 feet to the street or nearer than 15 feet to the side or rear lot lines. The usual utilities are available.

PENCIL POINTS "PITTSBURGH" ARCHITECTURAL COMPETITION

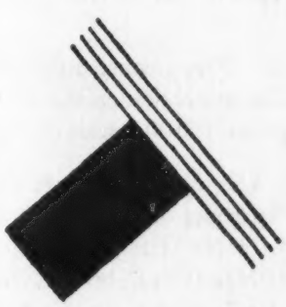
Joe and his wife have no preconceived notion of what their home should look like beyond desiring it to be up-to-date and attractive and suited to the local climate. While they are sympathetic to the healthy contemporary trend toward greater freedom in architecture they do not wish their home to be so unusual that it will be unduly conspicuous. They want light and cheerful interiors and are conscious of the feasibility today of having somewhat larger glass areas than were commonly used ten years ago. They depend upon their architect to advise them upon the building materials and equipment to be used. They are, of course, interested in keeping within their budget but they know that maintenance costs must be considered as well as initial outlay. Mrs. Joe expects to do her own housework and is anxious that this should be made as easy as possible by good planning and thoughtful detailing, so that she may have more time to devote to her children from whom she had to be separated during the war. Like most homemakers today, she particularly wants her kitchen and bathroom accommodations to be colorful, convenient, and easy to keep spotlessly clean.

Careful study of the client's needs—in conjunction with his present resources, his income, and the local building costs—leads the architect to conclude that his plan must be limited to 1400 square feet of floor area disposed on one or two stories. Not to be included in this limiting figure are the necessary single car garage and an adequate heater room either above or below grade.

Competitors are expected to provide for the comfortable and economical housing of the client and his family within the prescribed limits of area. Disposition of indoor and outdoor space, number of rooms, circulation, and accessories are left to the discretion of the designer.

Since G.I. Joe's number is legion, and since he may be found after the war in any part of the United States, it is left to each competitor to determine the locale in which his client is assumed to live. This chosen location must be clearly designated on the drawing and the Judges will take into account the regional suitability of the design. The sponsors, while naturally desirous of promoting the increased use of their products, are anxious that competitors shall use common sense and avoid extravagance in the disposition of these products. The designs will, it is hoped, show houses that might be appropriately built by the average family described in the program, at a cost of between sixty-five hundred and eight thousand dollars. This cost range is merely a suggestion and not a strict limitation in either direction.

Considerations of the Jury of Award



(1) The architectural merit of the design, including its regional suitability, and the ingenuity shown in the development of the plans to fit the requirements of the problem.

(2) Practicability and economy of construction.

(3) The intelligence with which the products of the sponsor are appropriately incorporated into the design.

(4) The special prizes will be awarded on the basis of the excellence of the interior detail shown on the drawing.
Quality of delineation and composition of the drawing will not have undue weight with the Jury.

COMPUTATION OF FLOOR AREA: *Mandatory.* Measurement of enclosed spaces shall be taken from the inside of exterior walls with no deductions for partitions. Open porches or partly enclosed porches shall be counted as fifty percent of their actual area. Entirely enclosed sun porches shall be counted at their full area. Designs found to exceed 1400 square feet total floor area (exclusive of garage, heater room and basement, if any) will not be considered.

DRAWINGS: *Mandatory.* All required drawings for each design shall be composed on a single sheet of opaque white paper, trimmed to exactly 25" x 36". The sheet is to be read with its long dimension vertical and shall contain the following items, in *opaque black ink:* (No diluted ink, color, or wash.)

(1) Floor plans at a scale of ⅛" equals a foot. The use and dimensions of each room or space must be clearly indicated in lettering large enough to be legible when reproduced at one-quarter size. Show suggested furniture arrangement.

(2) Perspective of the house, rendered in ink with pen or brush and so laid out that true heights may be measured at a scale of ¼" equals a foot on the corner of the building nearest the Station point.

(3) Elevations, at ⅛" equals a foot, of the two sides of the house not shown on the perspective.

(4) Plot plan at any convenient legible scale showing location of house and garage and arrangement of the property.

(5) Detail—in plan, section, and elevation, at ¾" equals a foot—involving the application of one or several of the sponsors' products in some interesting way or ways which may add to the attractiveness or efficiency of the home. These products include polished plate glass, plate glass mirrors, tempered glass, colored structural glass, figured glass, glass block, and others. The good judgment with which this detail of the design is developed will be the basis upon which the eight special prizes will be awarded.

(6) Separate single line diagram of floor plans at small scale indicating method of computing total inside floor areas.

(7) Drawings shall bear the title "PENCIL POINTS—PITTSBURGH ARCHITECTURAL COMPETITION," and shall be signed with a device or *nom-de-guerre.* The assumed geographic location for the design also shall be noted.

(8) A single sheet of 8½" x 11" paper, to be enclosed with the drawing, shall contain a brief typewritten outline specification listing the principal materials suggested for the house and noting color schemes where a significant factor.

ANONYMITY: *Mandatory:* Drawings shall contain no identifying mark other than a device or *nom-de-guerre.* Each drawing shall be accompanied by a plain opaque sealed envelope bearing the same device or *nom-de-guerre* as the drawing and containing a slip of paper on which the true name and complete address of the competitor are stated. The envelopes will be opened by the Professional Adviser in the presence of the Jury, only after the awards have been made.

DELIVERY OF DRAWINGS: *Mandatory.* The drawings shall be securely wrapped, either flat or in a strong tube not less than 2½" in diameter, and addressed to Kenneth Reid, Professional Adviser, PENCIL POINTS—PITTSBURGH ARCHITECTURAL COMPETITION, 330 West 42nd Street, New York 18, New York. In the case of drawings sent by registered mail or express, competitors must not demand a return receipt. Drawings shall be delivered to PENCIL POINTS office, 330 West 42nd Street, New York, or placed in the hands of the post office or express companies, not later than 6 p.m., standard time, Monday, February 26, 1945. Drawings will be accepted at the PENCIL POINTS office at any time before the close of the competition. They will be fully insured from the hour of their receipt.

Drawings submitted in this competition are at the competitor's risk. Reasonable care will be exercised, however, in their handling, safekeeping, and packaging for return.

EXAMINATION OF DESIGNS: The Professional Adviser will examine the designs and records of their receipt to see that they comply with the mandatory requirements of this Program. The Jury will make no awards to any design not complying with mandatory requirements.

The Professional Adviser alone will have access to the drawings until they are placed before the Jury of Award. No drawing, whenever received, will be shown or made public until after the Awards by the Jury.

JUDGMENT: The Jury of Award will meet at Hot Springs, Virginia, on March 14, 15, and 16, 1945.

ANNOUNCEMENT OF THE AWARDS: The Professional Adviser will send by mail, to each competitor, the names of the winners of the Prizes and Mentions as soon as possible after the awards have been made and the envelopes have been opened. The announcement will be published in the April 1945 issue of PENCIL POINTS. Requests for this information by telephone and telegraph will not be answered.

REPORT OF THE JURY: The winning designs and a full report, stating the reasons for the awards and offering helpful criticism and comment will be published in PENCIL POINTS for May 1945. The Report will be sent to each competitor.

THE PRIZE DESIGNS: The designs awarded Prizes and Mentions are to become the property of the Sponsors. Since this is an educational competition, and none of the houses are to be actually built, no further drawings will be required of the competitors. Whenever and wherever any of the designs are published or exhibited, the names and addresses of the designers will be clearly displayed and all resulting inquiries will be directed to them.

RETURN OF DRAWINGS: Non-premiated designs which are not reserved for exhibition or publication will be returned in a reasonable time, postage and $50.00 insurance prepaid.

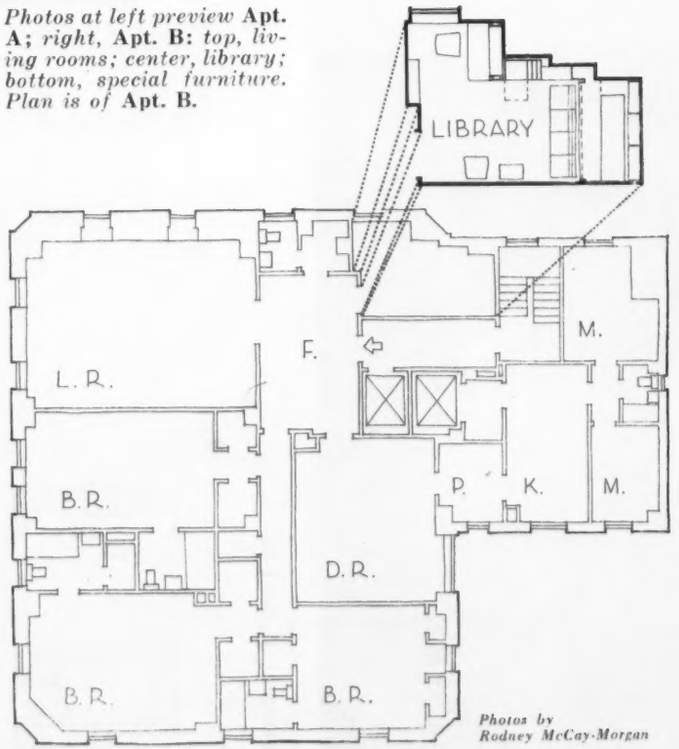
NOTICE TO COMPETITORS: Any architect or draftsman who has difficulty in securing paper of the size called for by the mandatory requirements of the foregoing program will be provided by PENCIL POINTS with a sheet of Whatman's 133-pound Hot Pressed paper, Double Elephant size, for one dollar. The paper will be shipped prepaid not earlier than January 1, 1945, in a tube suitable for remailing the finished design. Address remittance to PENCIL POINTS, 330 West 42nd Street, New York 18, New York.

Two Identical New York Apartments Have Their Faces Lifted

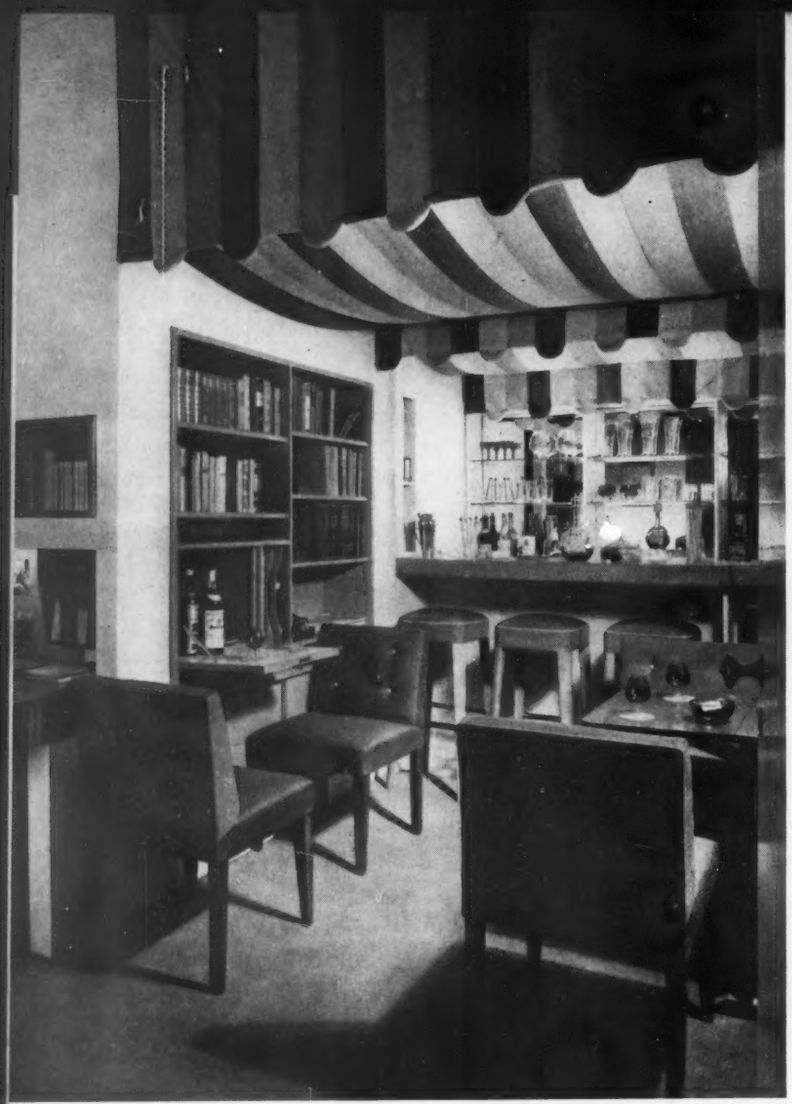
FELIX AUGENFELD, Architect

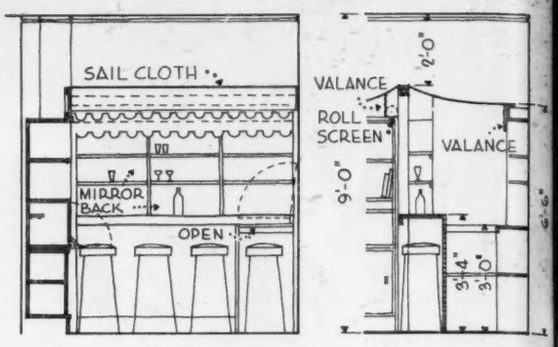
Any urban apartment dweller knows how much imagination and ingenuity are required to make a home out of the rigid framework he leases. Here are two individual solutions, for apartments one above another in the same building, designed by an architect who, in each case, had to struggle particularly hard with the typical realtor's absurdity which is lifted out of the plan below on stilts.

Photos at left preview **Apt. A**; *right,* **Apt. B:** *top, living rooms; center, library; bottom, special furniture. Plan is of* **Apt. B.**



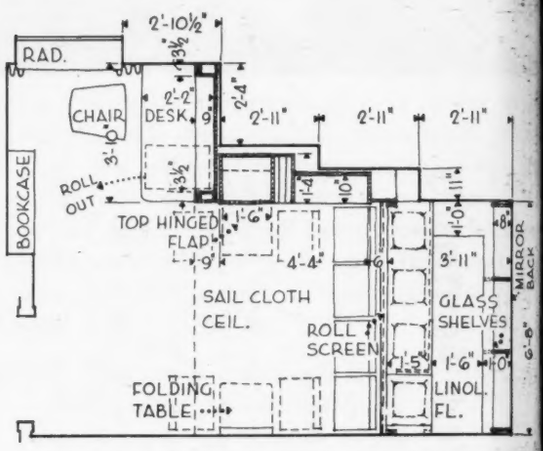
Photos by Rodney McCay-Morgan





ELEVATION SECTION

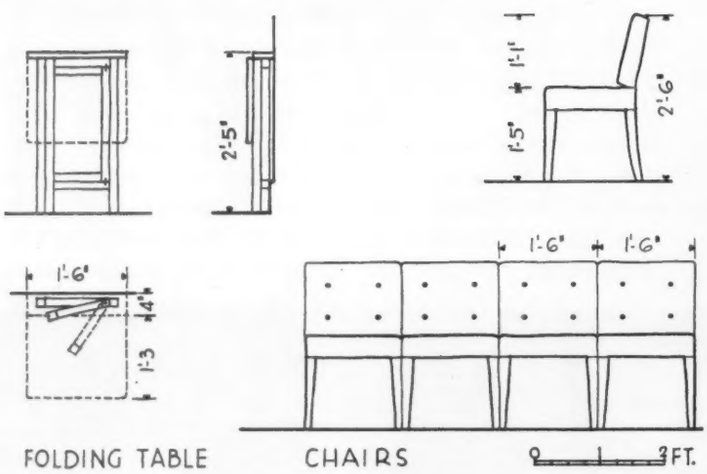
BAR DETAILS



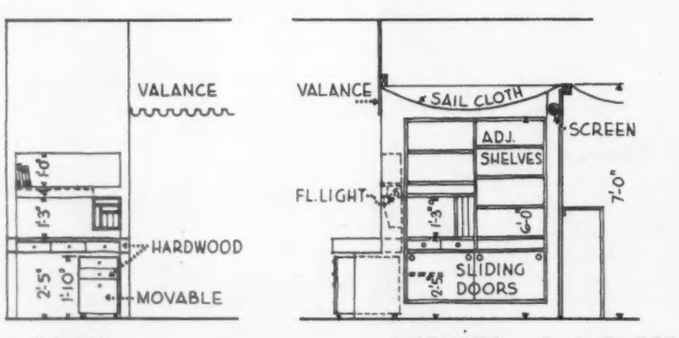
PLAN 0 1 2 3 4 5 FT.

Apartment A: Study-Bar

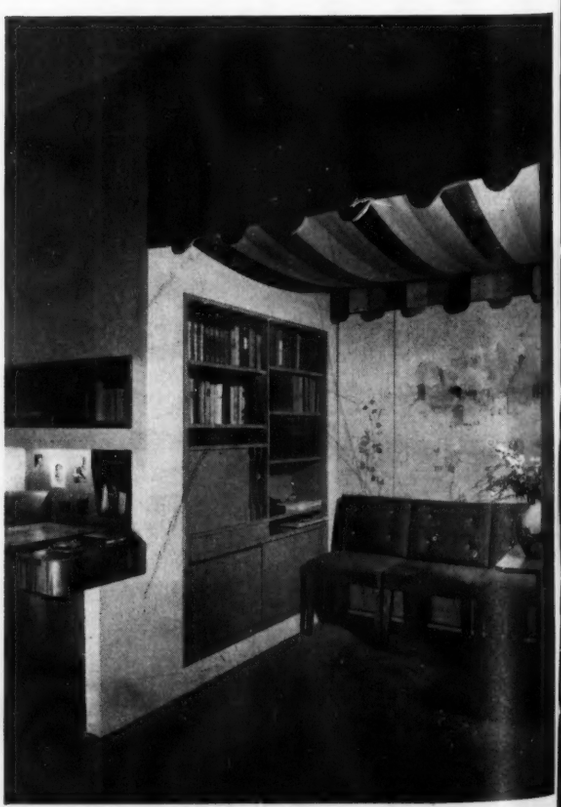
FELIX AUGENFELD, Architect



FOLDING TABLE CHAIRS 0 1 3 FT.



DESK SHELVES 0 1 2 3 FT

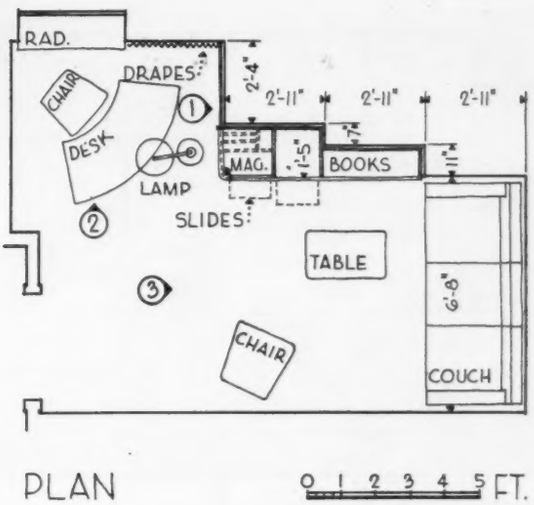


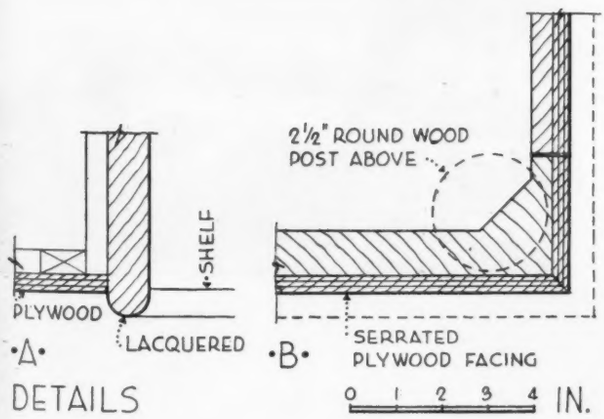
Apartment B: Library-Sitting Room

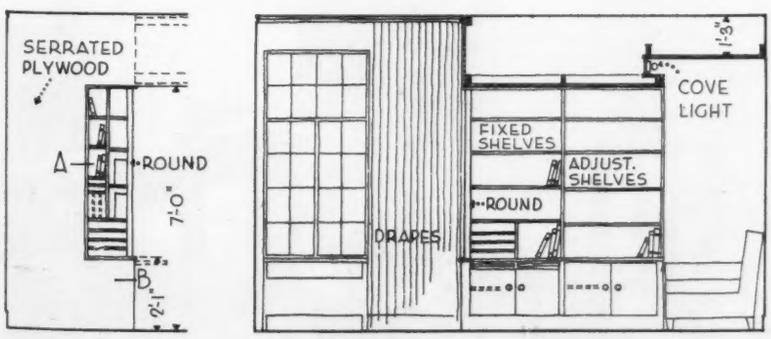
Apartment A (facing page): Here, the absurd little room has been converted into a flexible dual-purpose area: combination study and bar. When the bar is not in use, it is concealed by a room-height, slatted screen designed by Costantino Nivola. When a party is scheduled, the screen rolls up to reveal a shining bar, complete with four bar stools and a mirrored bar back.

A panel, lowered from one of the shelf units, becomes a small table; another, drawn from a dropleaf console, forms a second table, and the chairs are pulled up in an *a deux* arrangement. The ceiling of the alcove is a sail-cloth canopy, so hung that it is easily taken down for cleaning. The built-in shelves are red lacquered; bar woodwork is lacquered white; floor covering is green.

Apartment B (this page): In the other apartment, the similar cramped space becomes a comfortable library-sitting room. A part of the ceiling has been dropped, and the walls are furred out to eliminate awkward breaks. Wood wall surfaces are natural-finish, scored plywood. Elsewhere the walls are painted ivory. Bookcase and shelving are lacquered gray; all-over carpet is red, and sofa and chair are covered in printed linen.



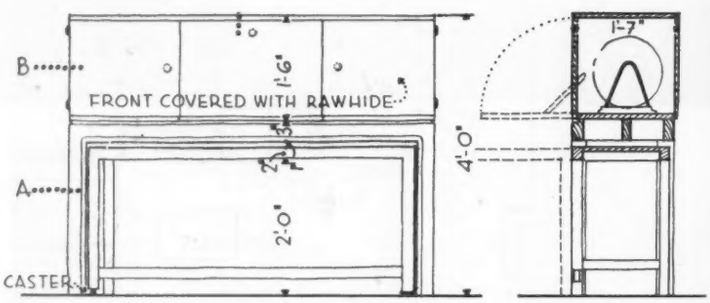


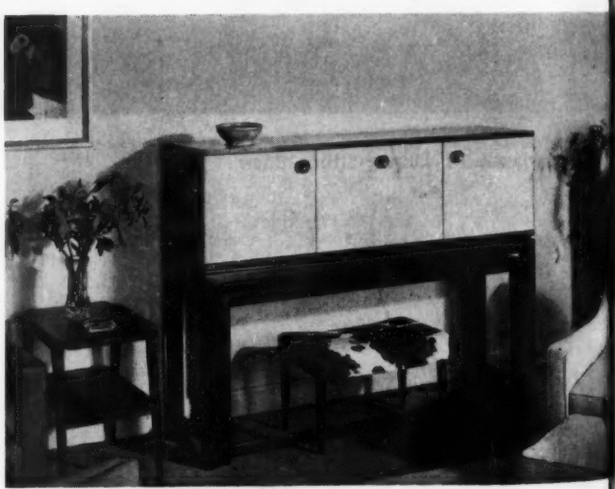


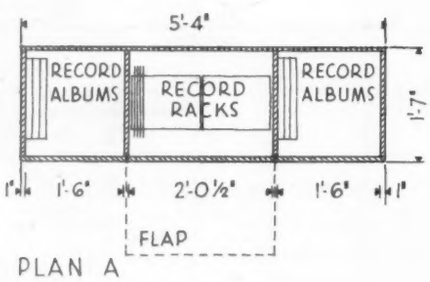
Apartment A

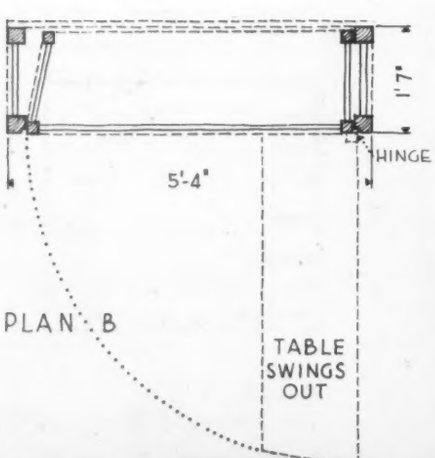
The architect designed Apartment A's dining room, including furniture. Table extends by adding side tables. Furniture has bleached maple frame, gray leather upholstery, polished black glass table tops. Lighting fixture is perforated plywood.

Record Cabinet: *wood is rosewood; doors and drop-leaf are covered with rawhide to match the fireplace wall surfacing.*









Apartment B

In both apartments, the "Landlord Gothic" of the original has been eliminated. Fake, carved sandstone mantels have yielded to plain furred walls.

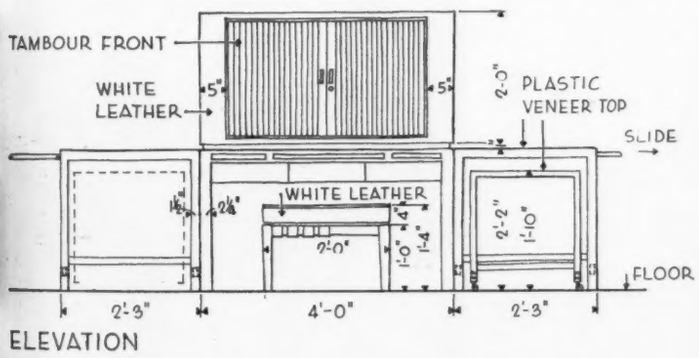
In **Apartment A** (facing page) the fireplace wall has wood panels surfaced with rawhide; niche over fireplace opening is also a light source. Furniture is rosewood; wall hangings are raw silk painted in gold; sofa is red; chairs are yellow and beige. Rug is also beige. The compact record filing cabinet provides generous storage space, a stool, and a swing-out bench on which to open albums and make selections.

Apartment B (this page): new mantel shelf contains a built-in light. Upholstery of semicircular sofa is part red and part beige. Furniture woodwork is mahogany; walls are painted ivory, rug is beige.

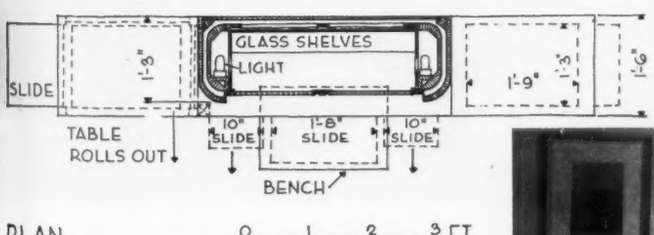
The six-piece cocktail group: when in use, doors of the central unit are rolled back, three slides are pulled out in front for drink mixing; others pull out from end units, and a pair of serving tables wheel out for use wherever needed. A small bench is provided for the bartender.

Cocktail Group: *cabinetry is mahogany, with the outside of the central unit covered with white leather, which is also used for the bench cushion. Inside, the bar has mirrored sides and back, lighted by lamps concealed within the cabinet. Tops of tables and slides are a heat- and liquor-proof plastic derivative.*

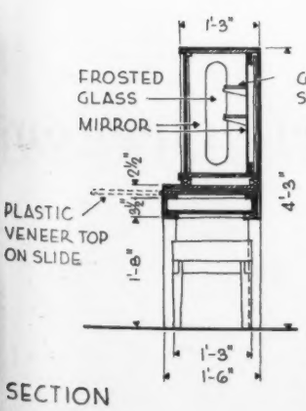
FELIX AUGENFELD, Architect



ELEVATION



PLAN 0 1 2 3 FT.



SECTION

COCKTAIL CABINET

Beach House in Gearhart, Oregon fo

on for Mr. and Mrs. Peter Kerr

Pietro Belluschi, A.I.A., Architect

P. A. Dearborn

Beach House

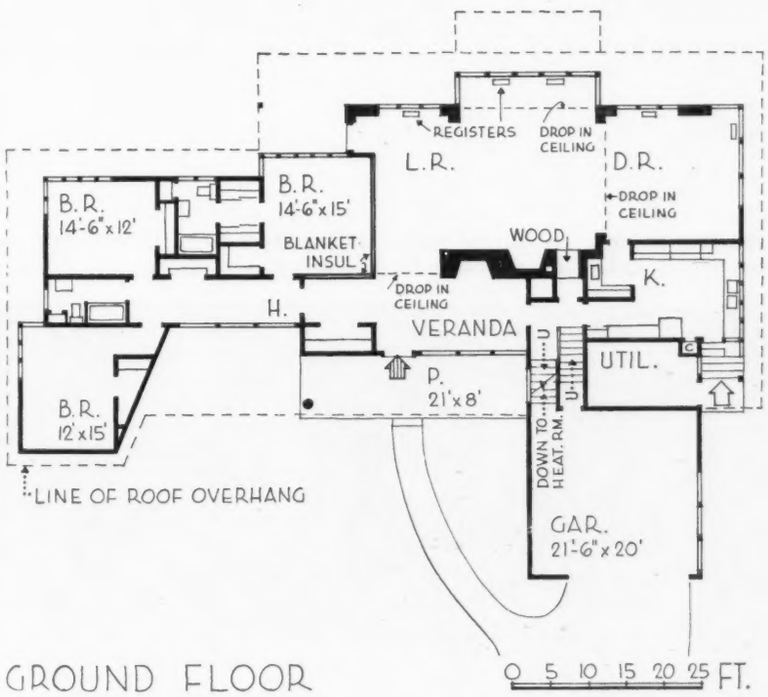
PIETRO BELLUSCHI, A.I.A., Architect

Delano

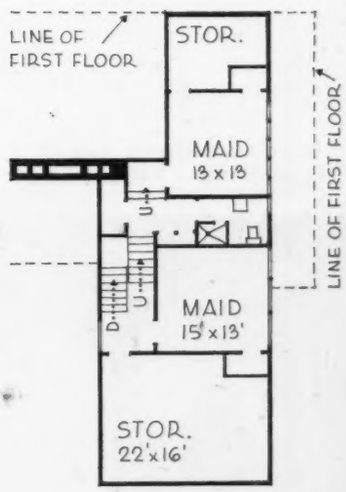
Seen from the ocean side, where beach grass, yellow sand flowers, even wild strawberries, grow up to the walls as they do to the entrance shown above, the house benefits from its lack of the usual landscaping. Nature, a far better designer than most human beings, provided a setting into which the architect placed the house with the least violence possible.

Mr. and Mrs. Peter Kerr are along in years, and need household help, particularly considering that their daughters and grandchildren are here with them much of the summertime. When you add to such a fundamental need the requirements for simple, joyous vacation living, you have the basis for designing this house. To the problem the architect brought sensitivity, understanding and an essential practicality. The Kerr's house is no artificially rugged cottage in which to find an artificially "natural" escape from reality; it is as comfortable as the traditional old shoe, a home which helps sensible, civilized people to get truly close to the pleasant aspects of nature. The chores and the clutter of the usual vacation cabin are minimized by the design, which incorporates up-to-date mechanical equipment and such a material as concrete (in the floors on which sand is likely to be tracked) in a manner as unobtrusive as that in which the house fits its setting.

P. A. Dearborn



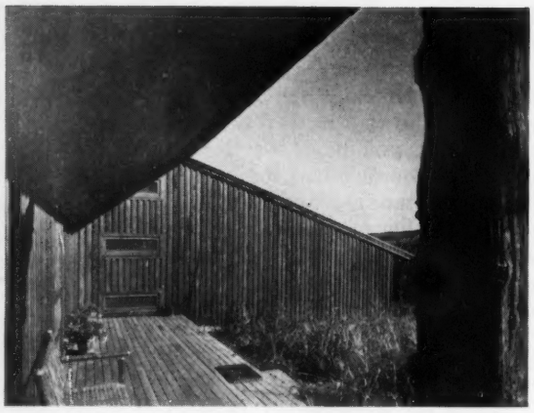
GROUND FLOOR



UNFINISHED
UPPER FLOOR

P. A. Dearborn

Common spruce boards and battens, laid vertically, rough side out, cover the exterior walls. These and the vertical window mullions seem to carry the verticality of the plumed beach grass up the walls themselves. The long, low roof, surfaced with untreated cedar shingles which have weathered beautifully, parallels the horizon, the lines of breakers, and the imperceptibly undulating land. The architect comments: "I have not been able to convince many people on my old cedar tree . . . I like it very much because it gives a surrealistic air . . . somewhat unexpected."

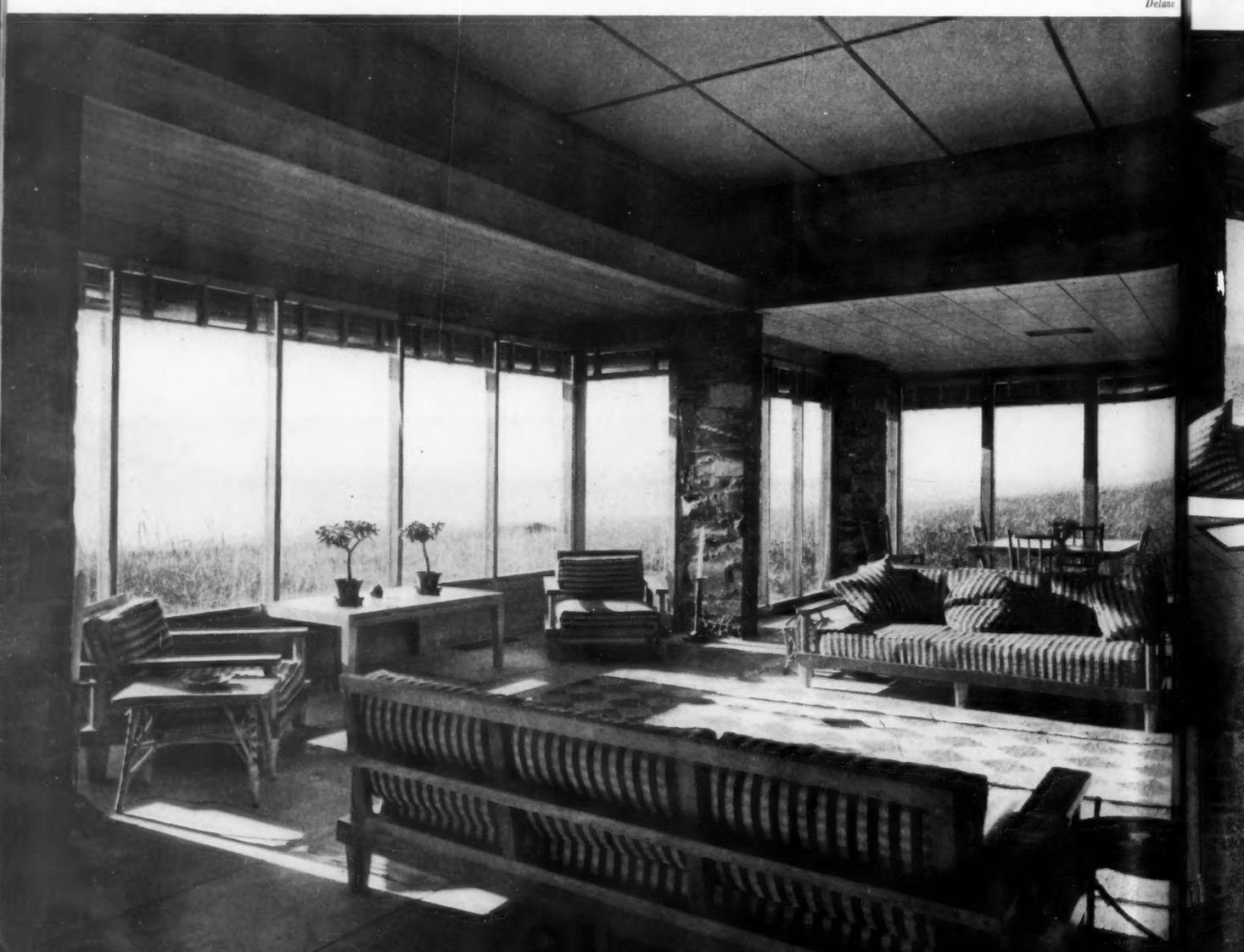


Delano

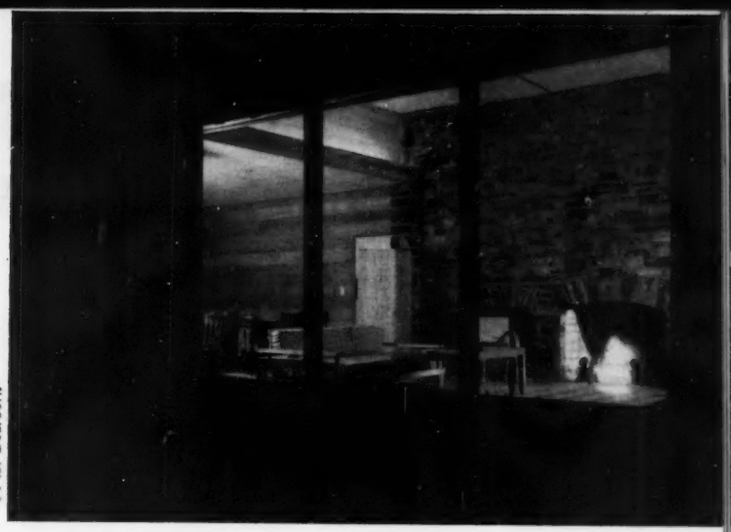
Veranda (left), directly inside porch (right), is distinguished from living room by chimney and dropped ceiling, not by doors.

Living room, dining room, and veranda form a spacious living area. Living room lighting is indirect, from outlets above the shelf visible in the photograph below. Dining table is lighted by a downlight set flush in the ceiling.

Delano

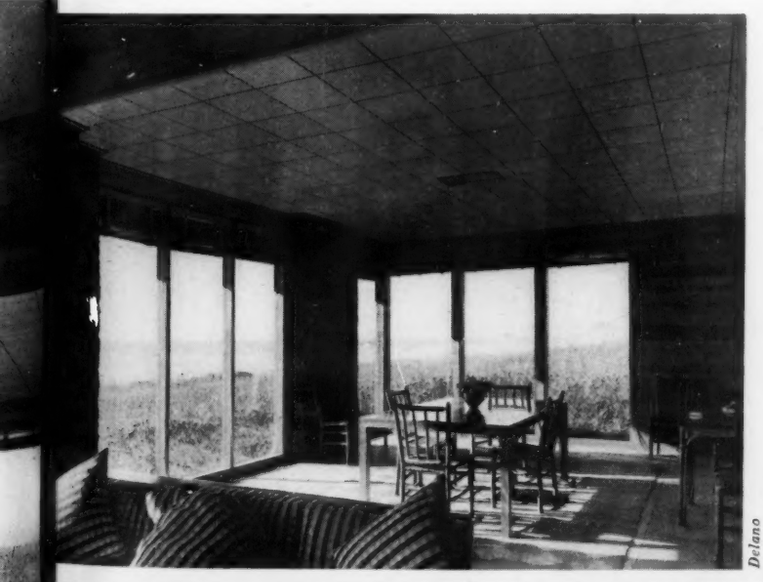


Masonry piers and chimney are built of stone from a neighborhood quarry; the range of color in the stonework is from gray through tan to gold. Exposed on both exterior and interior, these massive piles help by their placement, in conjunction with varying ceiling levels, to differentiate between areas in the living portion of the house, where few physical walls are used. Inside, walls are chiefly horizontal hemlock boarding; ceilings, insulating tile; floors, compressed fiber board or concrete. Kitchen and bath have white-enameled walls; between living room and bedroom wing the partition is filled with blanket insulation. Heat is furnished by a gas-or-oil-fired warm air furnace, from which concrete ducts run under the concrete floor to living room, dining room, and kitchen. Bedrooms are unheated; second floor can be heated at a later date through duct space left beside the chimney. Of another device Belluschi says: "If I could do the house over I would omit the sunshade-trellis above the living room window. It certainly harms the design . . . I have always thought I shouldn't be so practical."



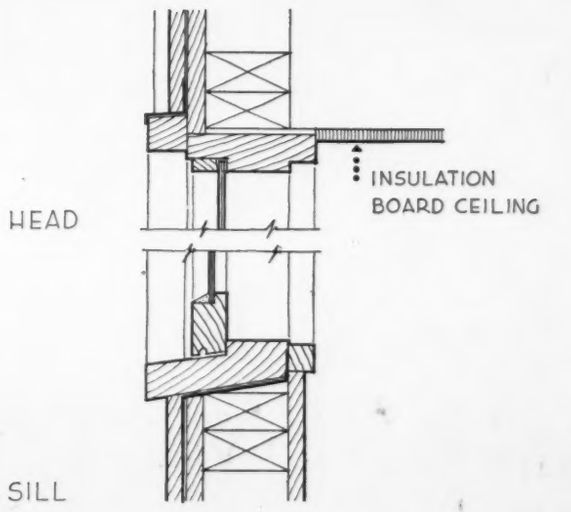
P. A. Dearborn

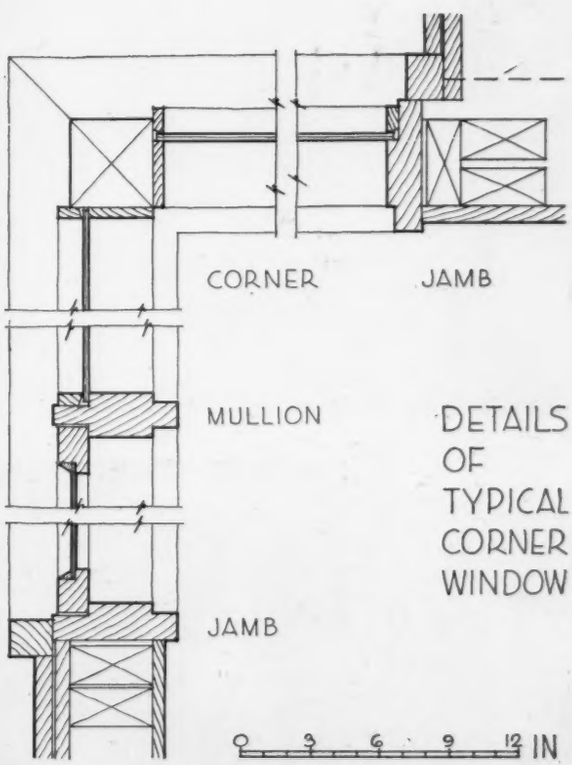
Top, dining end; and bottom, living end, of the main living area



Delano

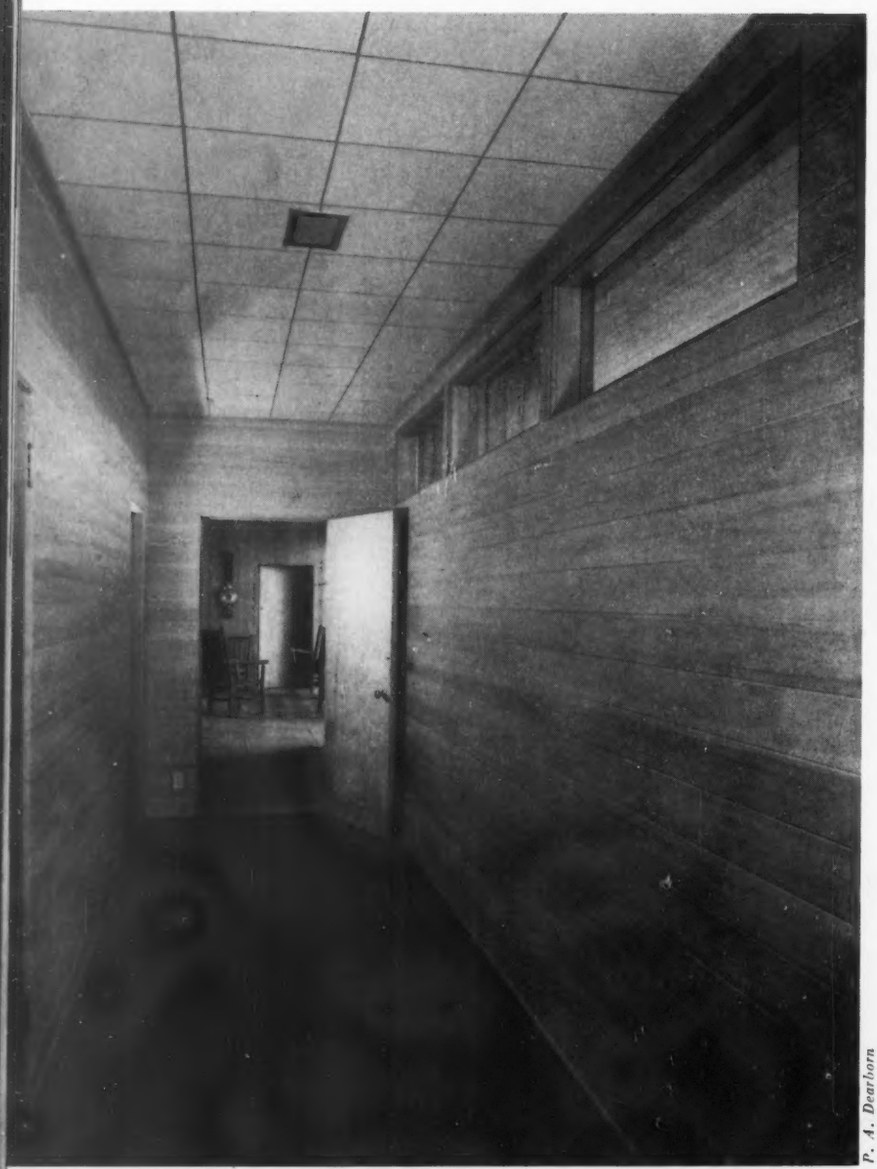
P. A. Dearborn



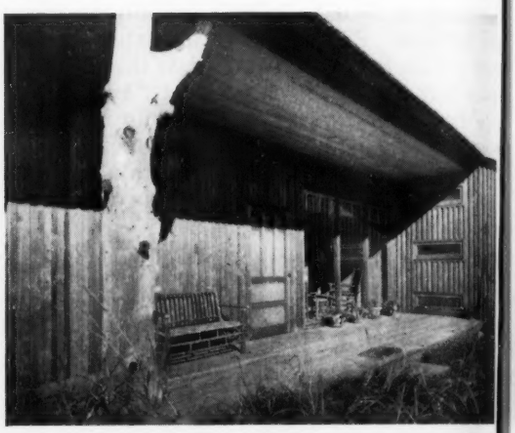


DETAILS OF TYPICAL CORNER WINDOW

Delano



P. A. Dearborn



Delano

Architect
PIETRO BELLUSCHI, A.I.A.,

Just inside the porch, shown above, is the wood-walled corridor leading from the veranda and kitchen (top of page) to the bedrooms (bottom).

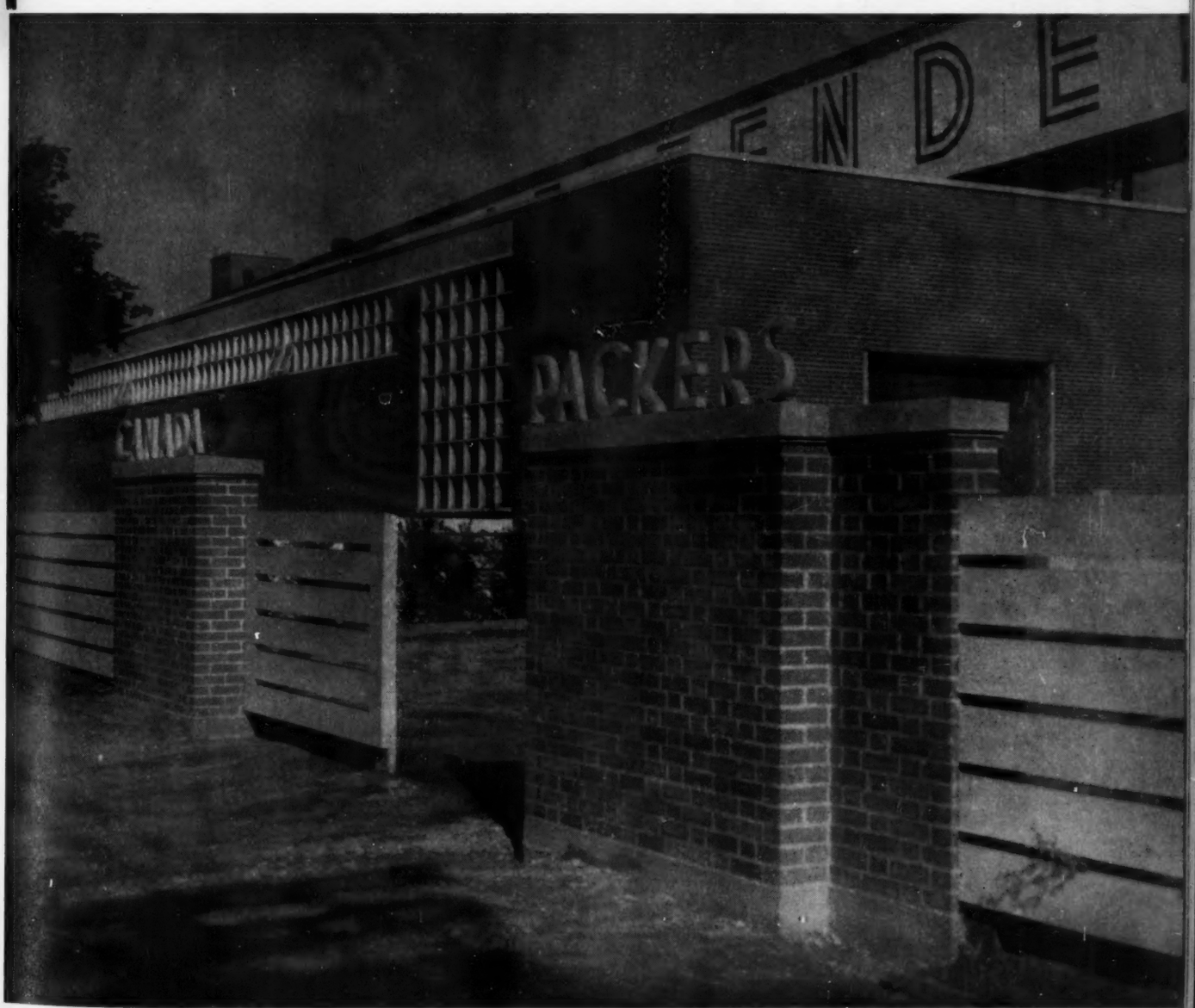
Delano

TRUCK GARAGE FOR CANADA PACKERS LTD.

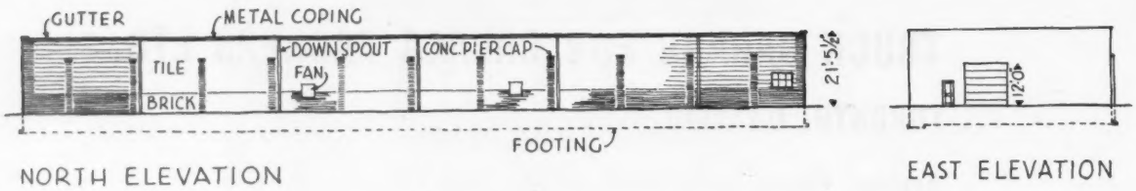
TORONTO, ONTARIO

Arthur, Fleury & Piersol, Architects

Built to house and service trucks of the Toronto branch of a large Canadian packing concern, this garage is carefully located with respect to adjoining industrial structures and a railroad siding. The building fronts on a main thoroughfare. Hence, although war restrictions limited the list of materials available, more attention was given to neat appearance and landscaping than is usual in buildings of this type. Details of the structure are given on the following page.

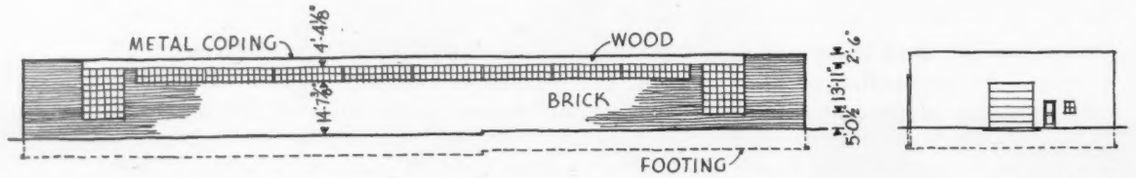


Garage Building . . . ARTHUR, FLEURY and PIERSOL, Architects



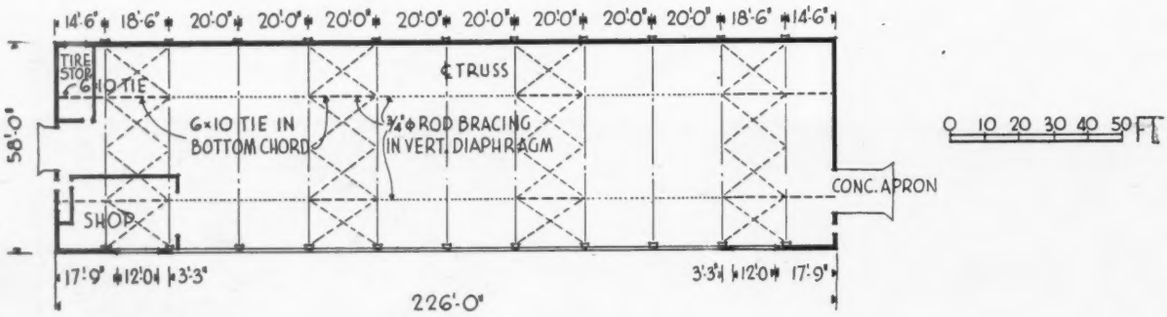
NORTH ELEVATION

EAST ELEVATION



SOUTH ELEVATION

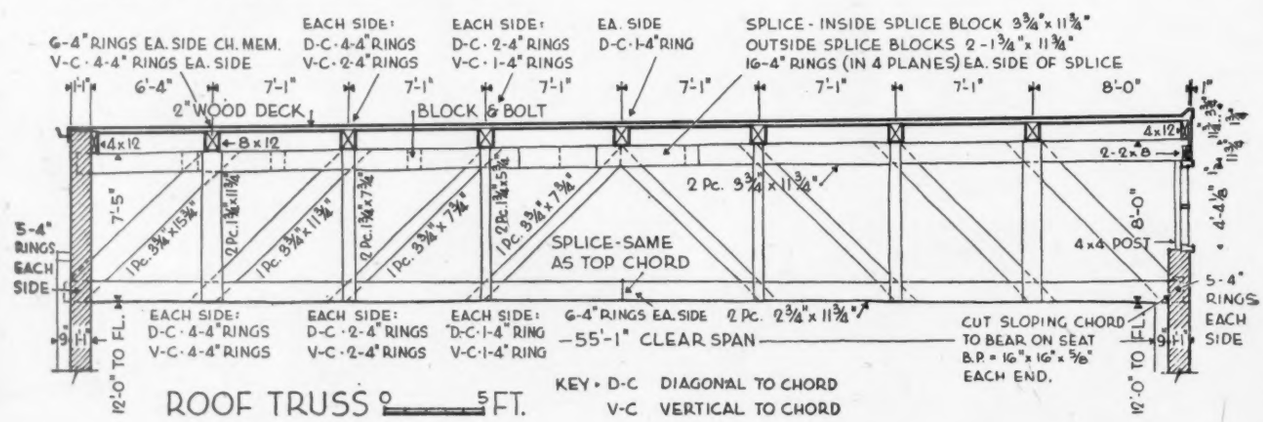
WEST ELEVATION

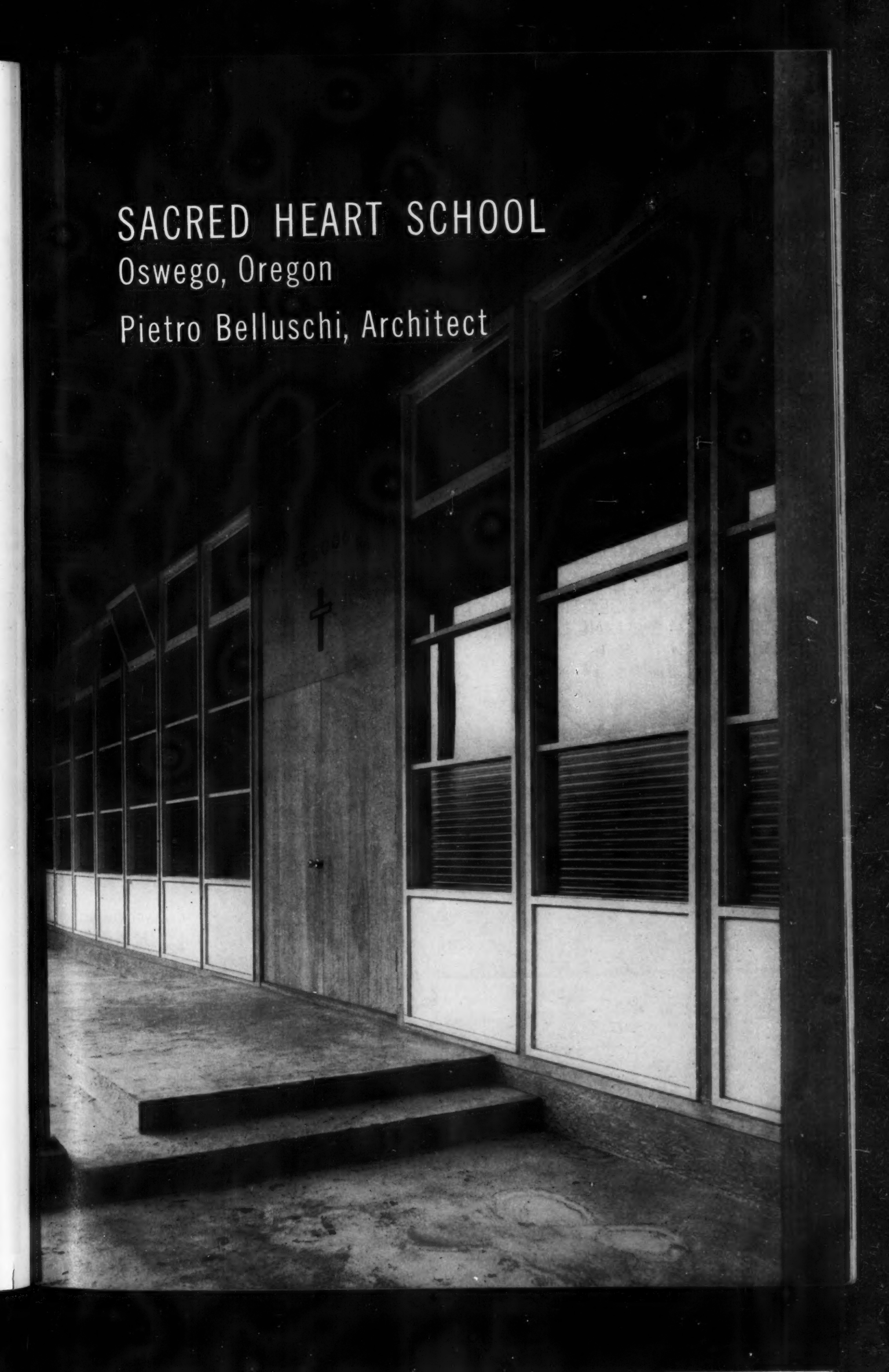


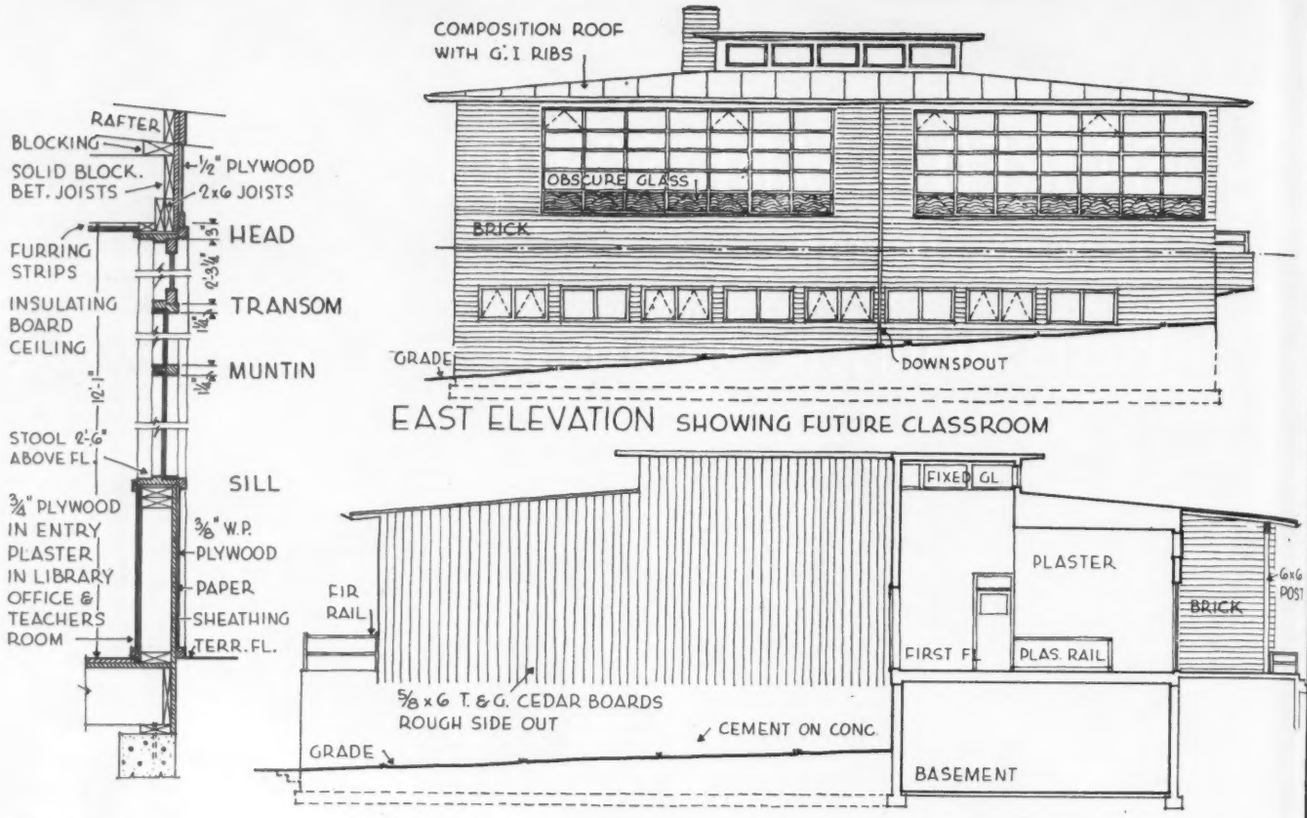
PLAN

The flat roof, pitched slightly to the rear, is supported by Howe trusses which have a clear span of 55 feet 1 inch. Trusses, assembled throughout with ring connectors, were prefabricated on the ground and hoisted into place. At the rear of the building, bottom chords of trusses bear on masonry columns, top chords on the continuous 13-inch tile wall. In front, bottom chords likewise rest on piers; top chords, on 4-by-4 inch posts which are also structural mullions.

Partitions at shop are of 6-inch tile for approximately 4 feet above the floor; above that they are of wood framing, surfaced both sides with plywood, with some fixed sash to permit the entire garage to be kept under observation.




SACRED HEART SCHOOL
Oswego, Oregon
Pietro Belluschi, Architect


COMPOSITION ROOF WITH G.I RIBS
OBSCURE GLASS
BRICK
GRADE
DOWNSPOUT
EAST ELEVATION SHOWING FUTURE CLASSROOM
RAFTER
BLOCKING
SOLID BLOCK. BET. JOISTS
½" PLYWOOD
2x6 JOISTS
HEAD
FURRING STRIPS
INSULATING BOARD CEILING
TRANSOM
MUNTIN
STOOL 2'-6" ABOVE FL.
SILL
¾" PLYWOOD IN ENTRY
PLASTER IN LIBRARY OFFICE & TEACHERS ROOM
⅜" W.P. PLYWOOD
PAPER
SHEATHING
TERR. FL.
FIR RAIL
5/8 x 6 T. & G. CEDAR BOARDS ROUGH SIDE OUT
CEMENT ON CONC.
GRADE
FIXED GL.
PLASTER
BRICK
6x6 POST
FIRST FL.
PLAS. RAIL
BASEMENT
DETAIL OF TERRACE WINDOW
0 1 2 3 FT.
SECTION ON CENTER LINE LOOKING WEST
N
D
JAN. CLO.
ROUGHING ONLY
GIRLS' TOILET
D.F.
CLOAK ROOM
FUTURE CLASSROOM
FUTURE AUDITORIUM
CORRIDOR
CLASSROOM NO.1
21'-6" x 28'-0"
602 SQ FT
CLOAK ROOM
CORRIDOR
10'-3" WIDE
CLASSROOM NO.3
21'-6" x 28'-0"
602 SQ. FT.
D.F.
BOOK
CLOS
ENTRY
LIBRARY
20'-6" x 13'-6"
D
OFFICE
7'-6" x 10'
TEACHERS
12'-6" x 10'
CLASSROOM NO.2
21'-6" x 28'-0"
602 SQ. FT.
CLOAK ROOM
TERRACE
0 5 10 15 FT.

Sacred Heart School, PIETRO BELLUSCHI, Architect

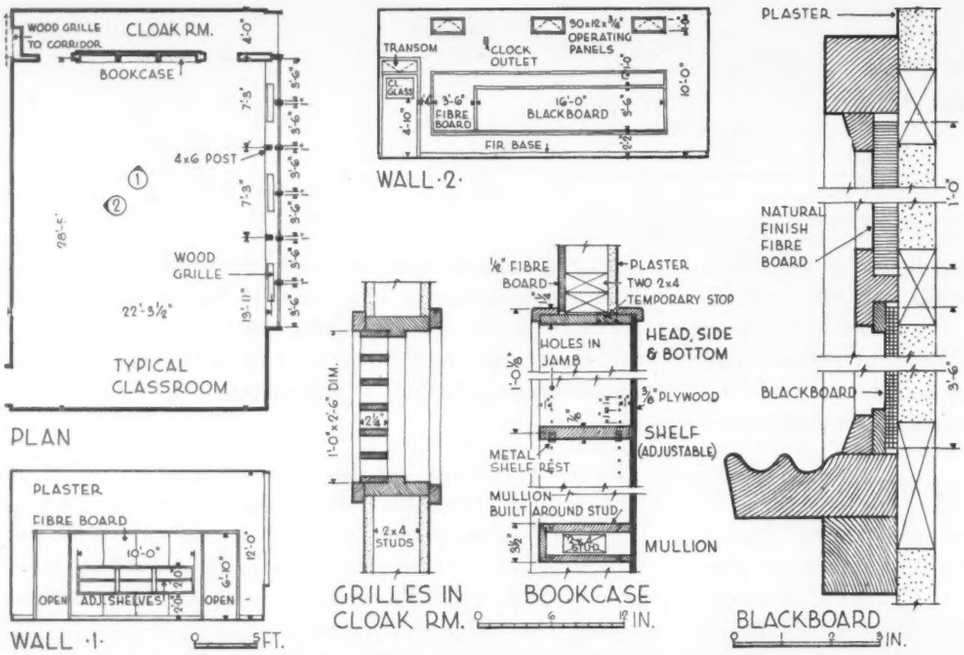
Although this is a little red school house, it has about as much relation to that sentimentally half-remembered, tight little barn as a helicopter to a horse and buggy. Not so long ago, the Georgian school of school-house architects would undoubtedly have complained that this doesn't "look" like a school. No cupola! No pediments! No tiny panes!!

True enough. Instead, this structure "works" like a school, which is much more to the point. In scale, proportion, texture and color value, the building is exceptionally pleasing. It may not "look" like a school, but it looks like a highly satisfactory *school.*

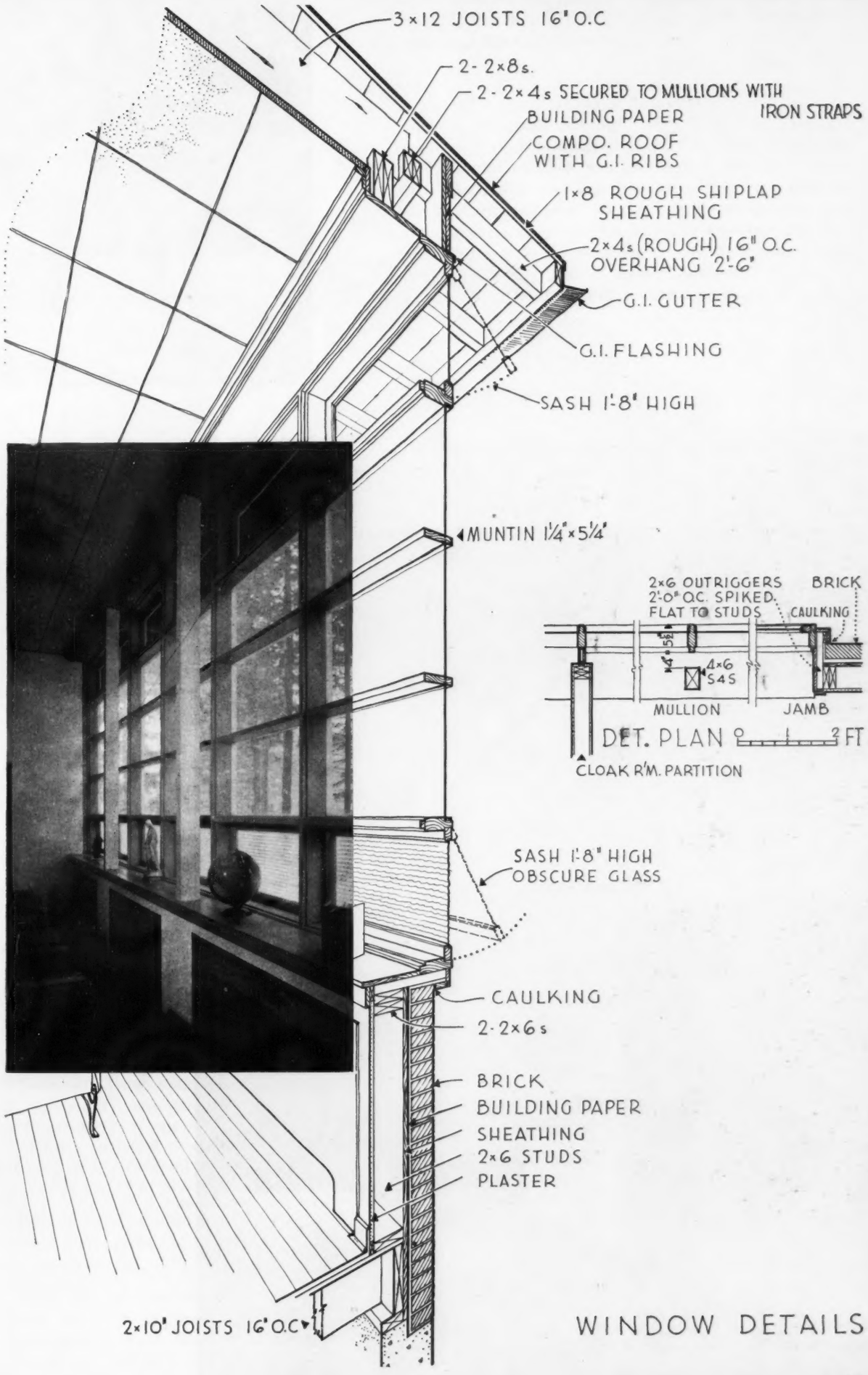
To produce it, the architect had a race with his building budget of $23,000. Initial hopes and the available funds had only a slight nodding acquaintance. As the plan indicates, the problem was solved by leaving desirable but not absolutely essential things for later construction. Another classroom is to be added to the left-hand wing; in the U-shaped space this will form at the rear, there will be a large room, to be used for a time as a church and later on as the school gymnasium.

Clerestory lighting for the hallway is essential when one considers the future use of what is now court space. As may be clearly seen in the classroom details on the following page, heating convectors are thoroughly integrated in design with the structural and window systems. The boiler and oilburning heater are located in the basement, along with washrooms, toilets, and storage space.

Structurally, the building is simple brick veneer over a wood frame; sash are wood, with operable glazed panels which provide ventilation without draft.



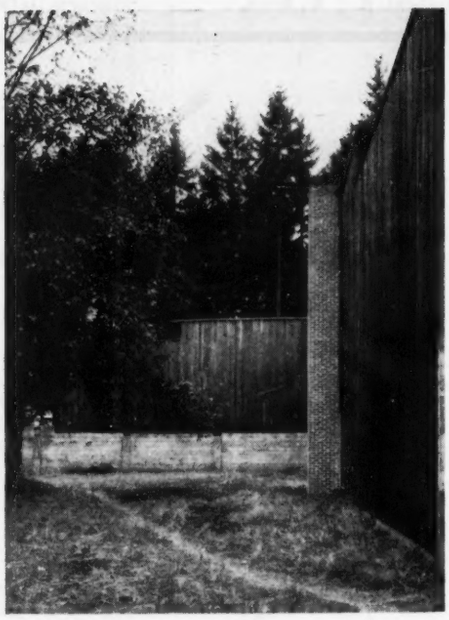
In the plan of the school, all the classrooms are precisely the same in detail. One wonders if placement of the typical big window is as satisfactory as if it had spanned the whole wall, or had at least been placed well down to the blackboard end of the room. Perhaps local school building laws forced this fenestration, or perhaps it is due to custom. However, it would seem that on a bright day, the wall at the corner would cast a sharp shadow across the one place in the room which should always be clearly seen from every scholar's seat. Yet, in general, elements of the rooms seem excellently disposed.



WINDOW DETAILS

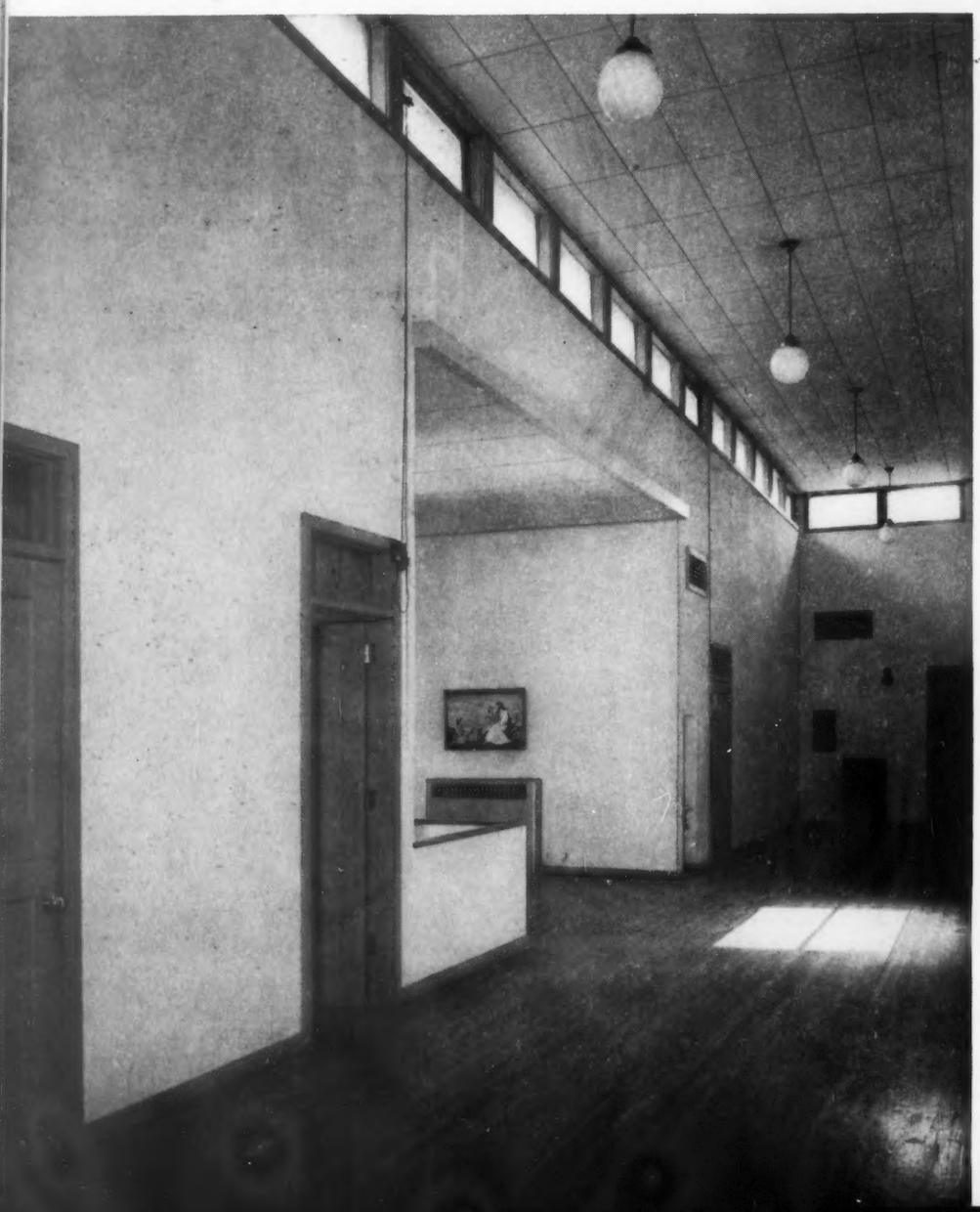
The architect says he thinks the rear of the building, temporarily covered over with simple boarding, "looks better than the front." Parenthetically, he goes on to say that he believes the rear elevations of fully 70 percent of all buildings look better than their self-conscious front facades.

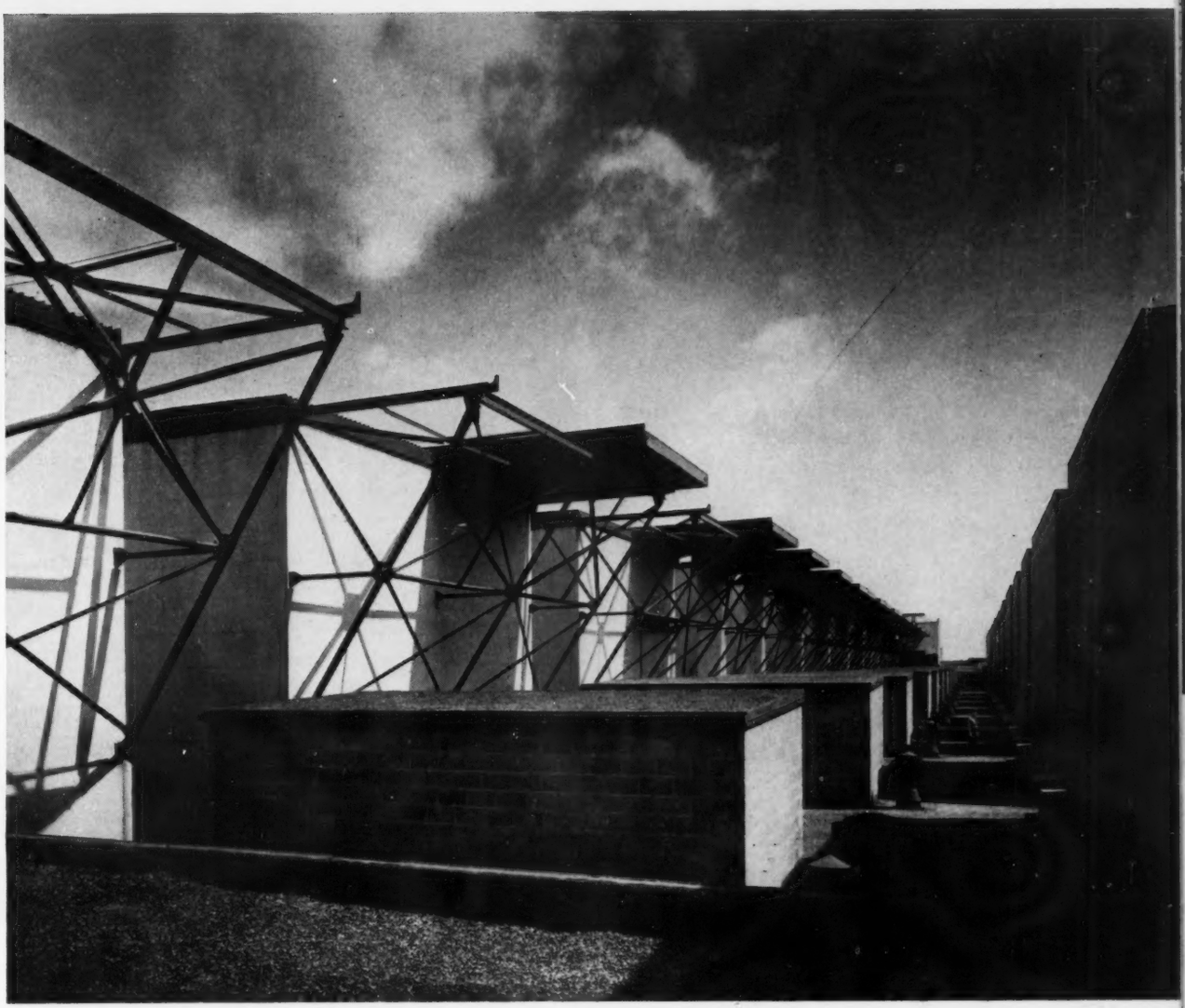
While this is too sweeping a generalization for us to subscribe to entirely, we think Mr. Belluschi makes a significant point. For on those faces of buildings where there is neither temptation nor need to impress, the designer perforce works with the bare essentials, with no budget available for applied "architecture." If the architect manages to arrange these basic elements into a harmonious whole, he achieves an almost primitive quality of inevitability—an honest, unself-conscious quality that has no traffic with ostentation.



Sacred Heart School

PIETRO BELLUSCHI, Architect





Aviation Engine Plant, Chevrolet Division, General Motors Corp.

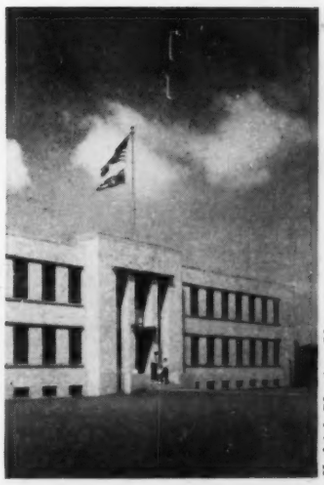
Tonawanda, N. Y.

Albert Kahn Associated Architects and Engineers, Inc.

Development of this war-production plant follows a pattern that has become increasingly familiar during the war years—initial requirements stepped up two to three times after construction was started; restrictions on materials requiring sudden shifts in structural detailing; the plant even now being altered and expanded. The design solution by the Kahn organization is also typical—straightforward, workmanlike, knowingly designed.

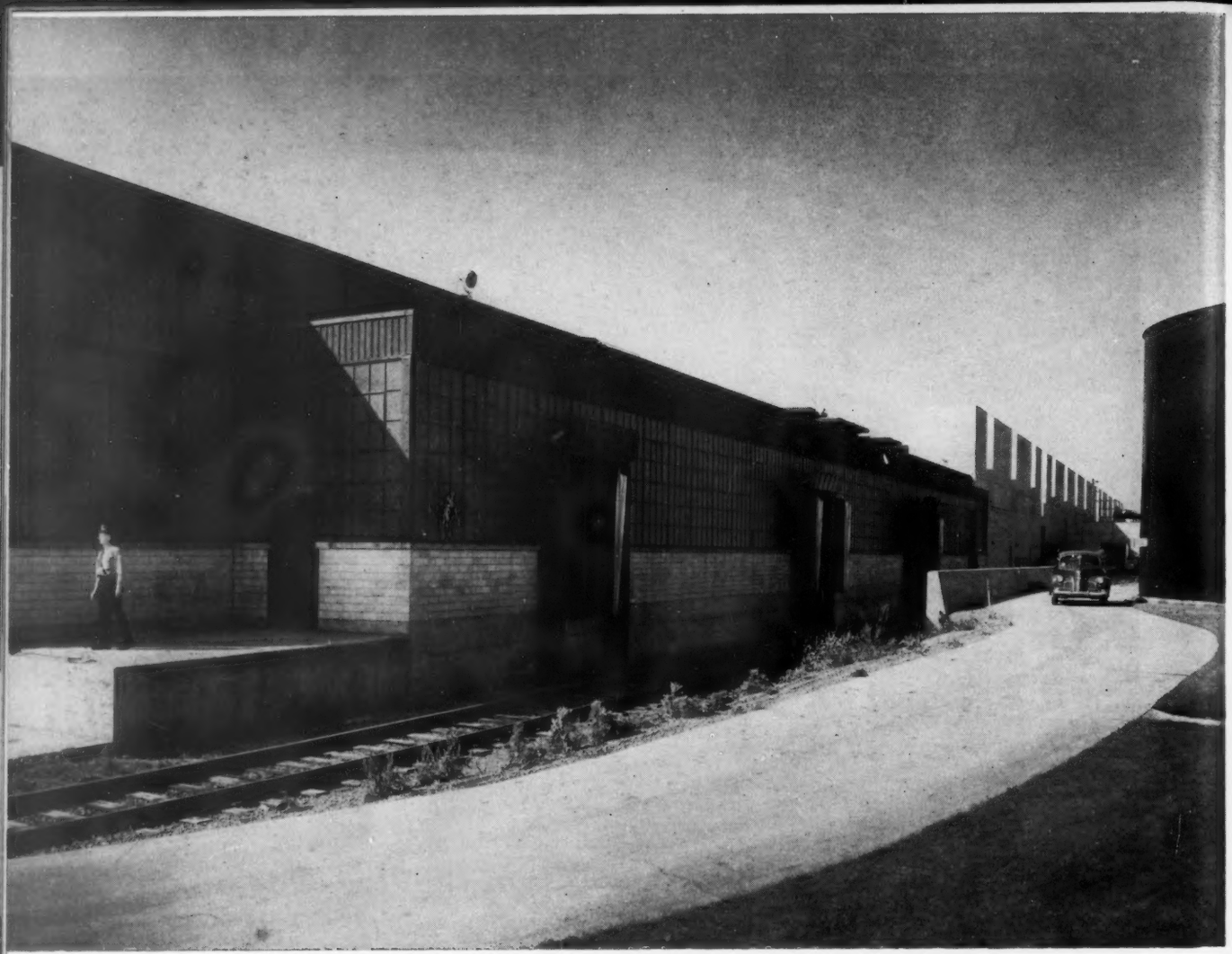
There were three major construction stages:

1. An original, basementless unit for production of parts and assembly of engines, begun before Pearl Harbor. Facilities included the manufacturing floor, served by truck and rail docks at one end; a plant hospital, located centrally on the production floor; service rooms, lockers, toilets, etc., on a mezzanine. Structure: steel frame, exterior walls of tile and steel sash, with asbestos-protected metal from the top of sash to the roof; roof slab of concrete tile; composition roofing. The floor of the manufacturing area is wood block. Special facilities: engine test cells and experimental cells; floors and overhead conveyor systems. Heating, supplied from the powerhouse of an adjacent existing plant. Lighting throughout the manufacturing area, fluorescent.



Hedrich-Blessing Photos

Administration Building (Stage 2)



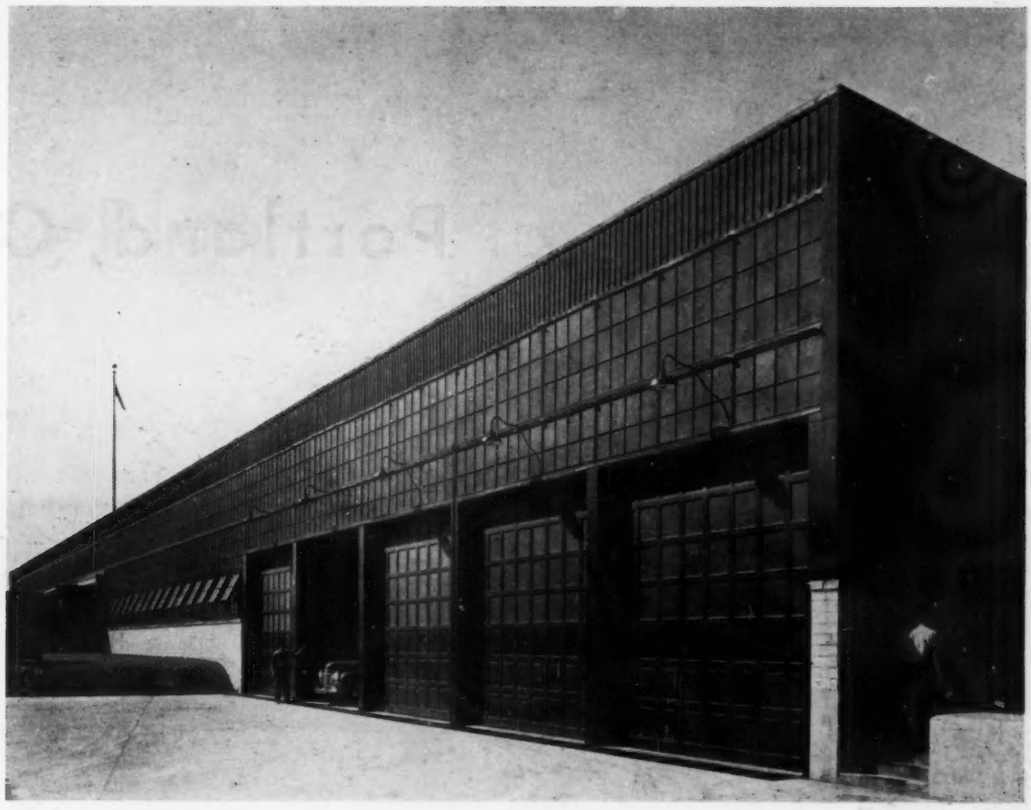
Rail sidings and access roads are part of the layout.

Steel frame and sash (Stages 1 and 3)

Concrete frame, wood sash (Stage 2)

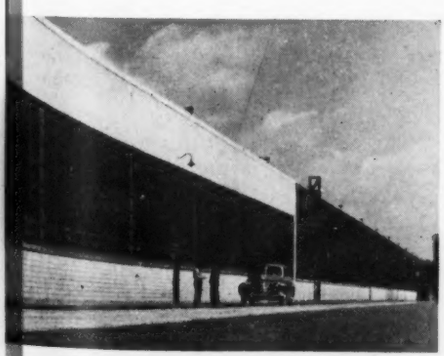
2. After Pearl Harbor, production requirements were doubled. The structural system specified for this extension was the same as that in Stage 1, but WPB restrictions on materials necessitated a sudden shift to reinforced concrete frame and wood sash. A basement was included under the extension. In addition, a separate administration building, connected to the factory by an enclosed passage, was constructed—a two-story and basement building, framed in wood, with exterior walls of tile, with wood sash and precast concrete sills and lintels. Also built at this stage was a 120-by-2500-foot parking area. A subway passage, entered through a head house on the lot, enables workers to go directly to the factory basement and thence upstairs to work stations. In the basement are lockers and toilets, cafeterias, kitchens, and executive dining rooms.

3. The final phase, begun in May, 1944, and due for completion before the new year, not only further extends facilities, but provides new types of facilities needed for production of larger Pratt and Whitney engines, and rearranges and modifies existing test cells. With steel again available, this third section of the plant repeats the structural pattern of Stage 1. To assist in heating the third section, unit heaters are being installed. Thus, the total factory, although structurally a sandwich with the concrete-framed portion in between two end units that are steel-framed, is, in fact, an integrated manufacturing unit with standard window and floor heights.



Garage and truck dock at one end of the first unit

Albert Kahn Associated Architects and Engineers, Inc.



Joint between concrete and steel is obvious, but the manufacturing floor is continuous

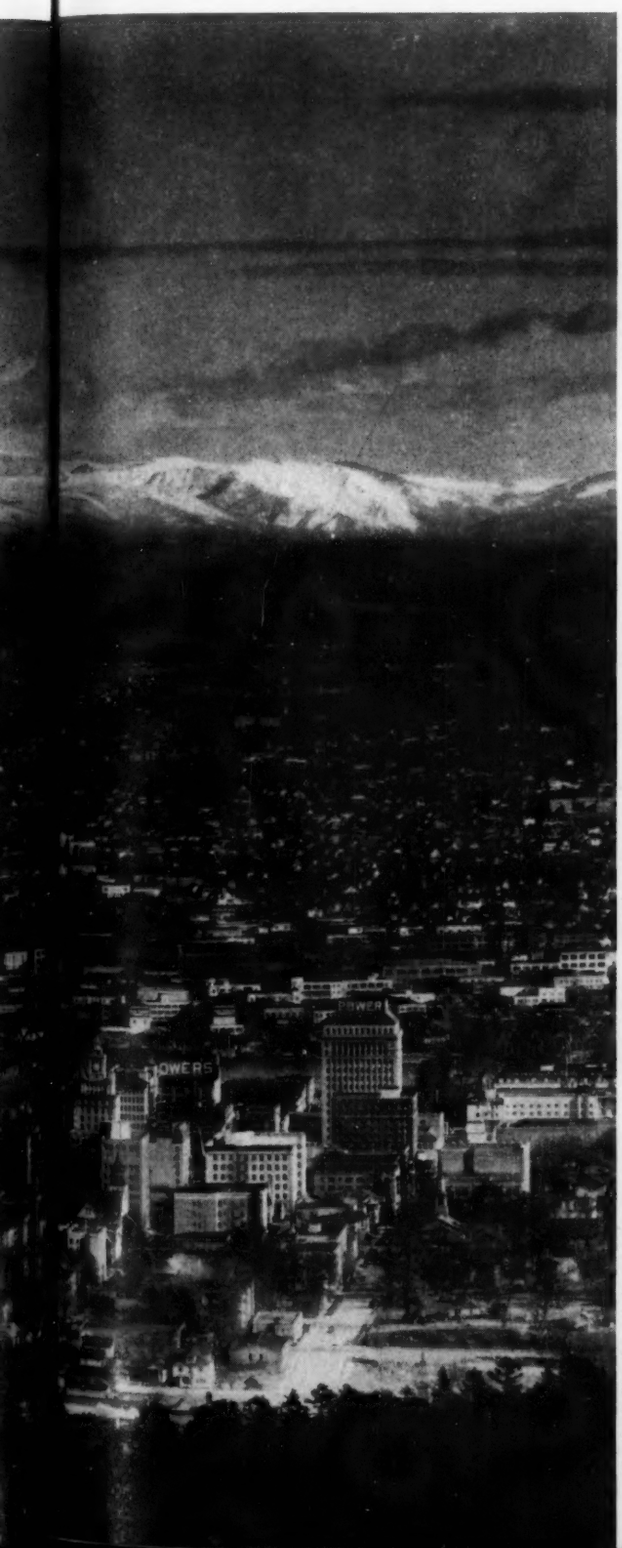
Steel-framed assembly area, typical of Stages 1 and 3

The City of Portland, Oregon,

Makes a Plan

Pleasant homes

Portland Chamber of Commerce



Portland Chamber of Commerce

Portland is a handsome city in a magnificent setting. Furthermore, since its normal growth (aside from war upsets) has been gradual, it has few scars from wild-eyed speculation. Yet Portland has civic dilemmas: inadequate public buildings, traffic routing and parking problems, declining commercial neighborhoods. The way the city's Planning Commission has tackled these may suggest solutions to other similarly situated communities.

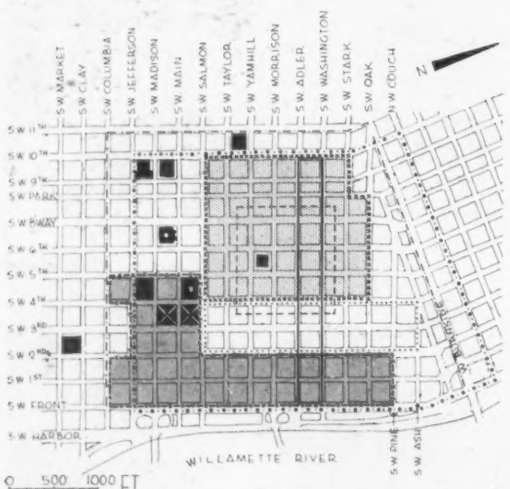
Decaying commercial fringe

Portland City Planning Commission

PROPOSED CIVIC DEVELOPMENT FOR PORTLAND

Excerpts from A Report to the People Prepared by Arthur D. McVoy, Director, Portland City Planning Commission

While credit for the preparation of the plan is shared by the entire Portland City Planning Commission, under the Presidency of Guy E. Jaques, special mention is due the following: William A. Bowes, Commissioner of Public Works, under whom the Planning Commission operates; the members of the Commission's Civic Center Committee: Charles McKinley, Chairman; Ernest C. Willard and A. Glen Stanton, A.I.A.; and Ernest C. Tucker, A.I.A., for his work on the plans and in making the presentation drawings. Map below indicates the areas under discussion.



PROPERTY WHICH MUST BE ACQUIRED BY THE CITY OF PORTLAND FOR THE COMPLETION OF THE CIVIC CENTER PLAN SHOWN DARK GRAY; CENTRAL BUSINESS, LIGHT GRAY.

CENTRAL COMMERCIAL SECTION

CENTRAL BUSINESS AREA
SOUND CENTRAL BUSINESS CORE
SEMI-BLIGHTED AREA
CIVIC CENTER AREA

The Portland City Planning Commission has faced its problems objectively and come up with a bold plan-solution—a plan that not only solves the immediate problems but constitutes a long-range civic development.

The Commission precedes the presentation of its proposed plan with a warning to Portland's citizens against the dangers of a do-nothing policy. Other cities, it notes, have come to similar points in their development, when past mistakes have piled up to threaten the whole future of the communities as healthy, growing entities. The ones which—either consciously or carelessly—have evaded self-diagnosis and application of appropriate cures have become second-rate communities with declining populations and descending property valuations. The ones which we today recognize as live communities had the vision to see approaching dangers and took steps to avoid disaster. For Portland, the latter procedure is unequivocally recommended as the *"greatest opportunity to become a great city of the future."*

Without acceptance of some such plan, the Commission cautions, *"Portland is likely to fall back into a relative position of obscurity, with the accompanying indictment of a reputation for limited progress and the attendant problems of unemployment and economic depression."*

A Complex of Interdependent Problems

In developing plans for downtown Portland's rehabilitation, the Commission started with a careful investigation into the city's most pressing needs. *"It immediately became apparent, however, that instead of having only one problem—providing an adequate plan for the Civic Center—there were several interrelated problems: the need for rehabilitation of certain areas (in downtown Portland) which had been going down very rapidly in*

property value and appearance for years; the need to provide easy access from major traffic arteries into the city center with a system of distributor streets; a very serious need for additional off-street parking; and the need for blocking commercial-area growth in certain directions in order to concentrate and stabilize it."

Using the need for a civic center as a constant reference point, the Commission approached the over-all problem from the viewpoint of coordinating the whole complex of related problems. As a result, the proposed plan has an exceptionally broad base for justification: it attacks all the problems previously enumerated, and it provides an adequate center for the healthy rehabilitation of the commercial area adjacent to the Center.

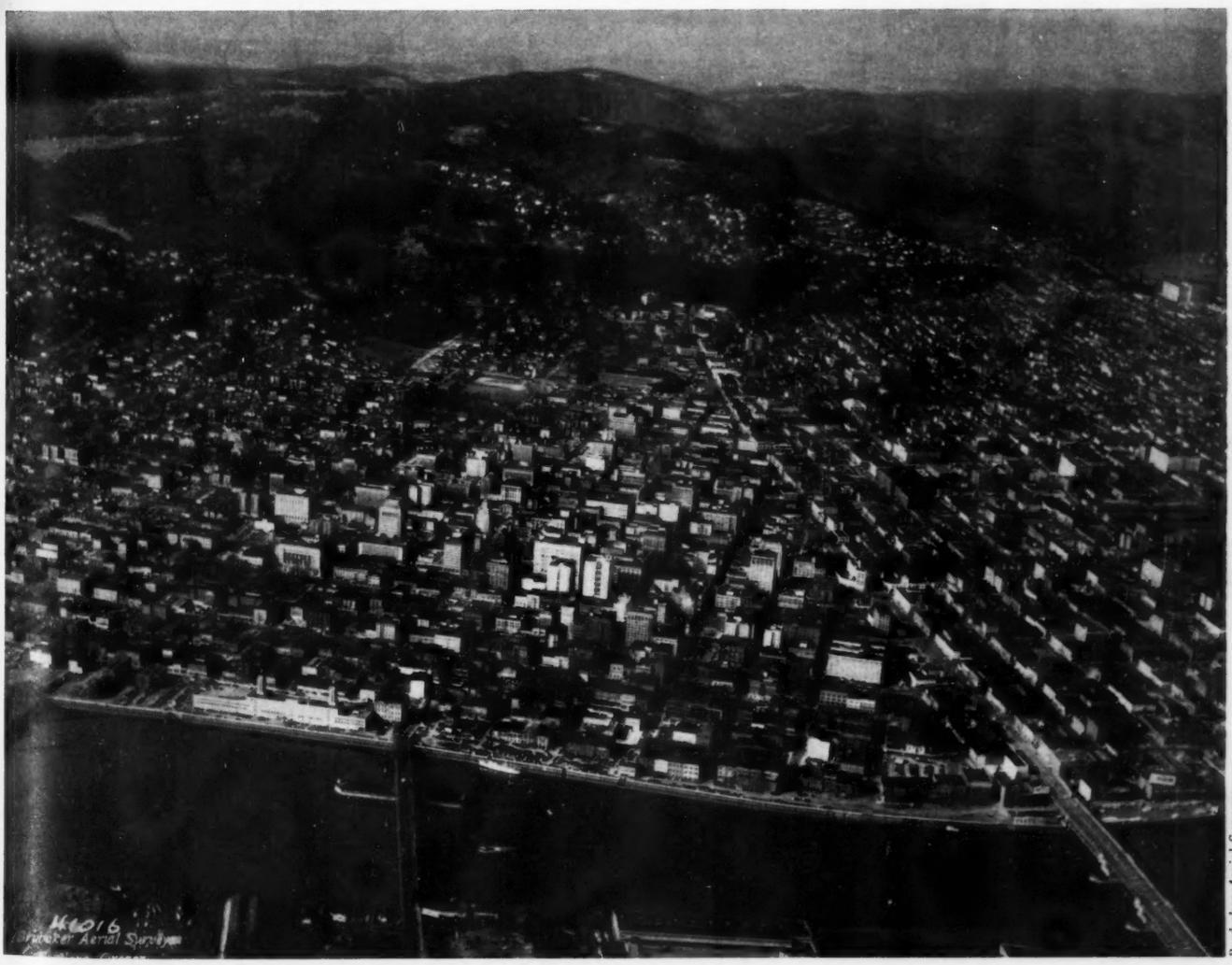
Pointing to the experience of other cities, the Commission observes that just one of these factors—the provision of an appropriately designed handsome street—has worked out not only in the retention of commercial establishments in the downtown area of the city, but also as the impetus that has drawn into the city commercial activities which would never otherwise have come from the outside. *"Existing examples, where application of this particular type of planning has actually produced results, are Biscayne Boulevard in Miami, Lincoln Road in Miami Beach, Park Avenue in New York City, Michigan Avenue in Chicago, and Canal Street in New Orleans. The two Miami projects were completed recently enough to convince us that such a force as a fine artery, upon which to develop high class commercial establishments, instills a very strong attraction to such development."*

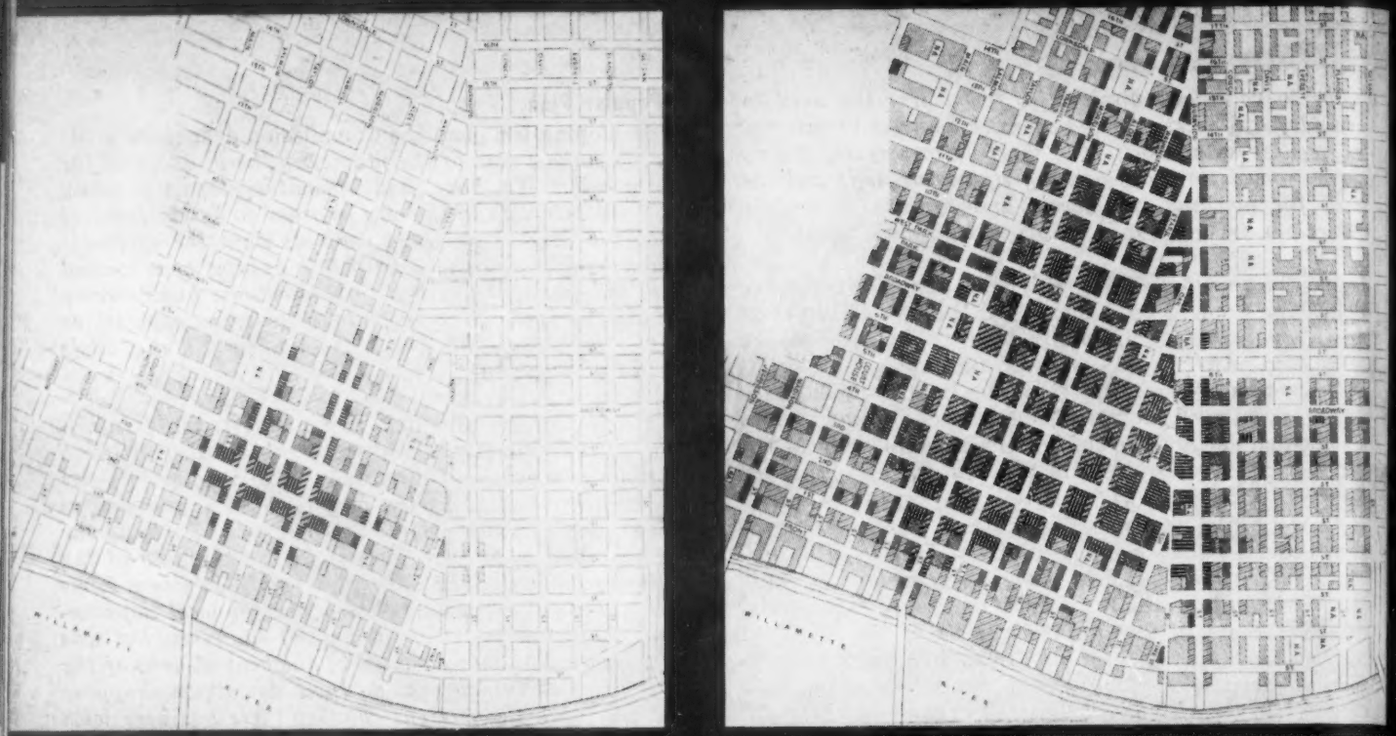
A Popular Plan

In developing the plan, the Commission defines its goal: *"... to make a plan of the people, by the people, and for the people. We have had consultations with many different interests in the city in order to determine just what the City of Portland wanted, what the attitudes of different public and semi-public groups were toward civic buildings, the attitude of downtown businessmen toward the needs of the downtown area, the aspirations of the people of the whole community for the city's future development."*

In concluding the preamble to its report, the Commission appeals directly to Portland's individual citizens, who, it is hoped, will eventually have the opportunity to cast their ballots on the proposal: *"The purpose of this report is to introduce to the citizens of Portland our thinking and what we believe to be the thinking of the majority regarding the improvement of downtown Portland. This project was not conceived for local improvement alone, nor for only one side of the river, but was conceived as the improvement of the central area of the city where all the citizens do their downtown shopping and where all the citizens conduct their business with governmental agencies.*

"We submit this plan to you, the citizens of Portland, for your consideration. We sincerely hope, therefore, that in its general approach the plan meets with your approval. If it does not, we will try again. It is consistently the hope of the City Planning Commission that what we do is always in the interest of you, the citizens."





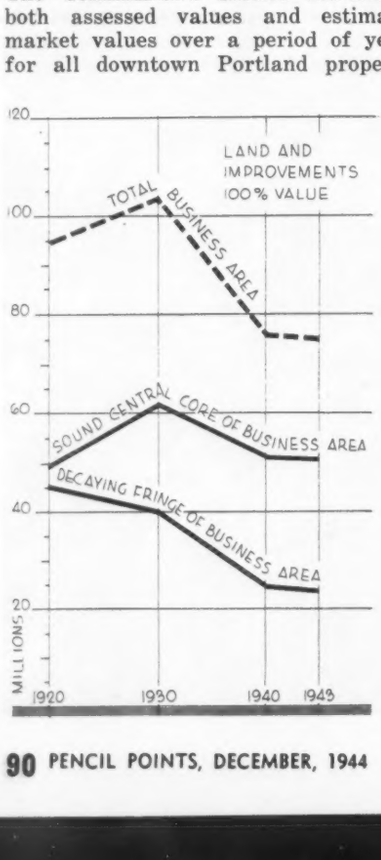
1900 **1920**

Property valuation maps; the darker the shading the higher the valuation. Note decline since 1920.

Diagnosis of Portland's Problems

In attacking the design problem, the Planning Commission researched the following major factors: property values; a location that would be most beneficial in stabilizing values; traffic and parking needs; the buildings that Portlanders want in a Civic Center; desirable physical relationship between governmental and other public and semi-public buildings; appropriate building settings; and the need to define and control growth of the central commercial area.

The Commission's studies determined both assessed values and estimated market values over a period of years for all downtown Portland property.



The accompanying graph (below left) shows not only the estimated market values of property to be dealt with today, but the history of market values in the past, for 129 blocks of the entire central commercial area. It also shows the healthy central core, 38 blocks of the highest property values. A third designation—for the remainder of the property in downtown Portland—is the "decaying fringe."

This study clearly indicated that location of the Civic Center along the waterfront would provide the maximum opportunity for stabilizing property values.

Traffic and Parking Ills

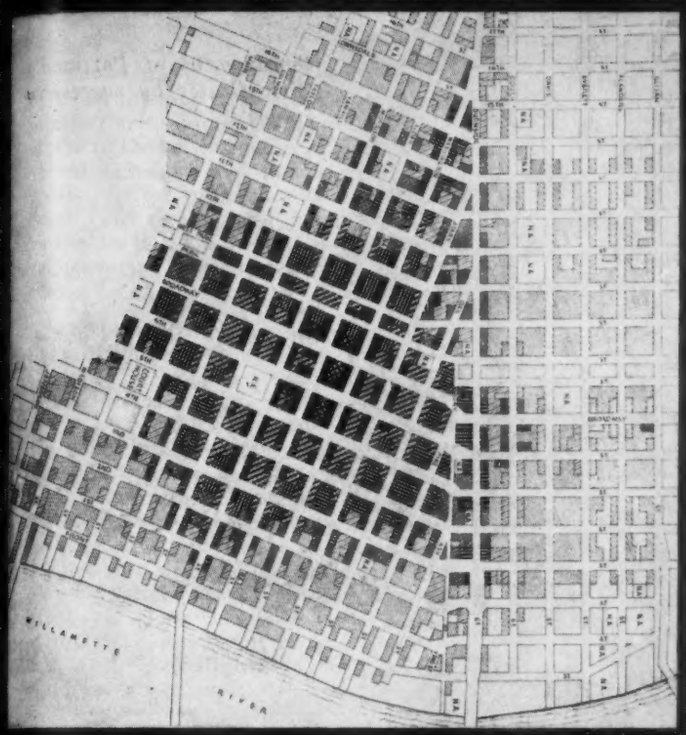
A solution to traffic and parking problems also seemed to lie in a properly located civic center, wtih an efficient street system coordinated with it. One of these problems is the serious matter of traffic coming in from Harbor Drive (bordering the river) which, in the plans of the State Highway Commission, will become a main artery for through traffic and an efficient means of getting to downtown Portland from all sections of the city. At the present time, Harbor Drive is built with entrances at grade intervals adjacent to the central area. Serious congestion and danger to traffic results from the necessity for left-hand turns through traffic lanes to enter the city center. Both the Highway Commission and the City Traffic Department are exceedingly anxious to eliminate this difficulty.

Also seriously needed is a better way of distributing traffic on the west side of the central commercial area. Still another problem is that of parking, which at present is very inadequate, as there are but a few scattered off-street parking lots.

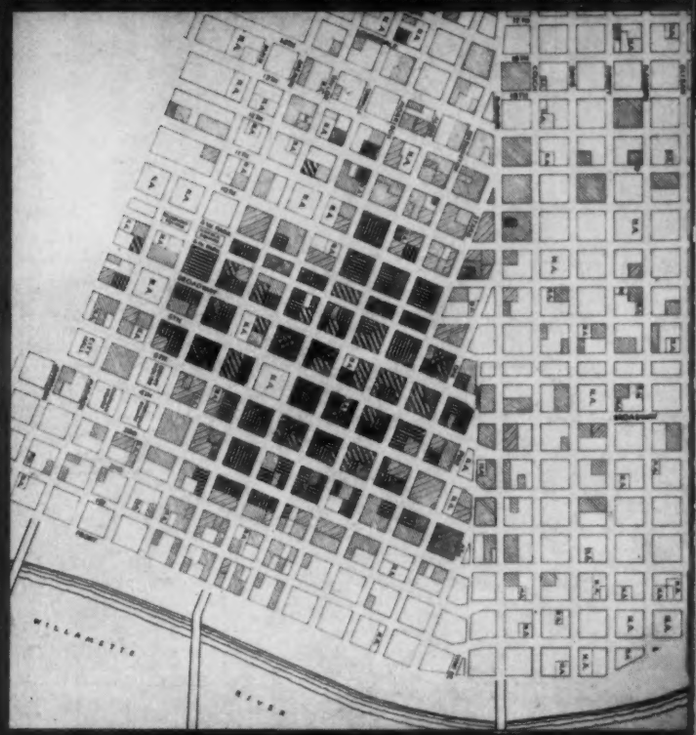
Needed Public Buildings

The Commission and its staff made a detailed study of the needs for new buildings in Portland, trying to determine among other things the popular demand, the possibilities of financing, and the relative benefit to the city. From this study it appears that the most serious needs are:

1. A new *jail*
2. A new *city hall*
3. A *State office building*
4. A *coliseum*, or sports-arena type of auditorium.
5. A new *music hall* (since the present auditorium is woefully inadequate from the standpoint of location, surroundings, acoustics, and architectural atmosphere).
6. A *horticultural center.* Such a center would not only serve as a place for horticultural exhibitions but would house the offices of several horticultural groups throughout the State. Possibly it should also contain a greenhouse with a display of plants from other parts of the world.
7. A *museum* for history, science and industry.
8. A group of *Federal office buildings.* The Bonneville Power Administration of the Department of Interior and the Forest Service of the Department of Agriculture, among the larger Federal organizations in Portland, already had had tentative plans for the construction of new units for their own offices after



1930



1943

the war. After considerable discussion with the more important federal agencies in Portland, it was agreed that it would be far more desirable to have the Federal buildings in one group to facilitate inter-agency communication and operation.

A study of the functional relationship of these and other groups of buildings determined that the City, County and State buildings should be grouped together because of the large amount of business transactions between these units. It was also found that it would be advantageous for the Federal group to have a closer relationship to downtown office areas and buildings than to local government units, and that the museum and horticultural center should be located adjacent to each other.

The Plan as a Corner Stone in Portland's Future Development

The Planning Commission seriously considered the need of so locating the Civic Center that it would become a barrier to the expansion of the commercial center in certain directions. However, expansion of the commercial section to the south has actually already been stopped by the County buildings and the City Hall, the Lownsdale Park blocks, the Federal buildings, the south park blocks, and several churches and clubs. Hence, the more serious problem seemed to be that of creating a barrier to stabilize and improve shrinking downtown property values rather than stopping further growth in the wrong direction.

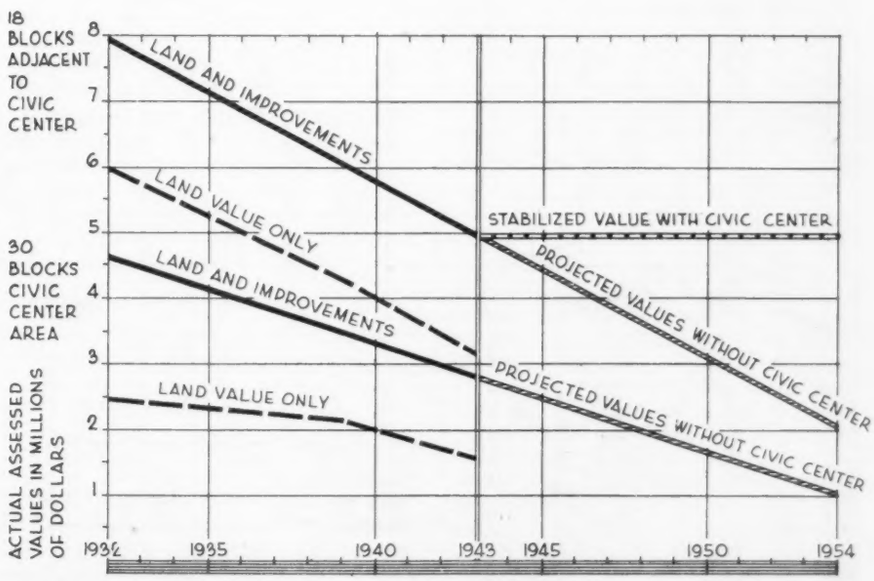
Keeping all of the above-mentioned matters in mind, the Commission developed the plan which accompanies this report.

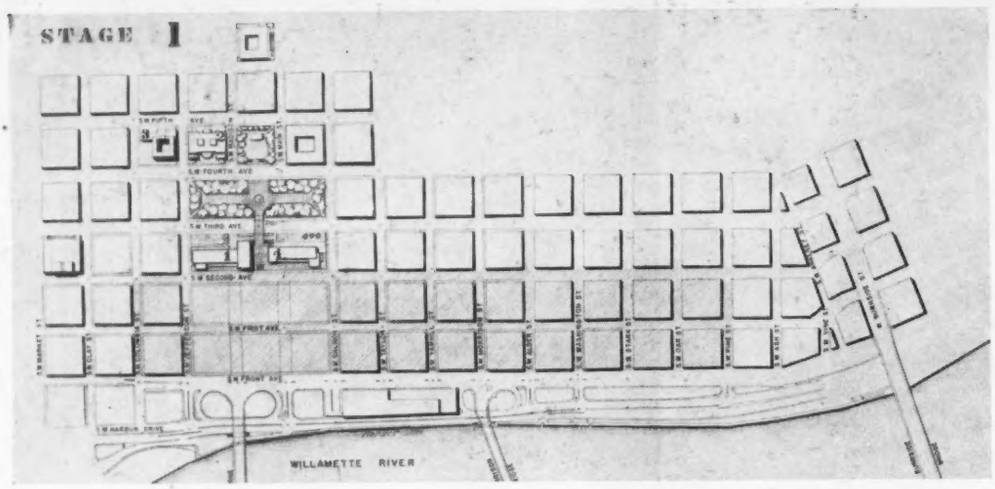
Property Values Stabilized

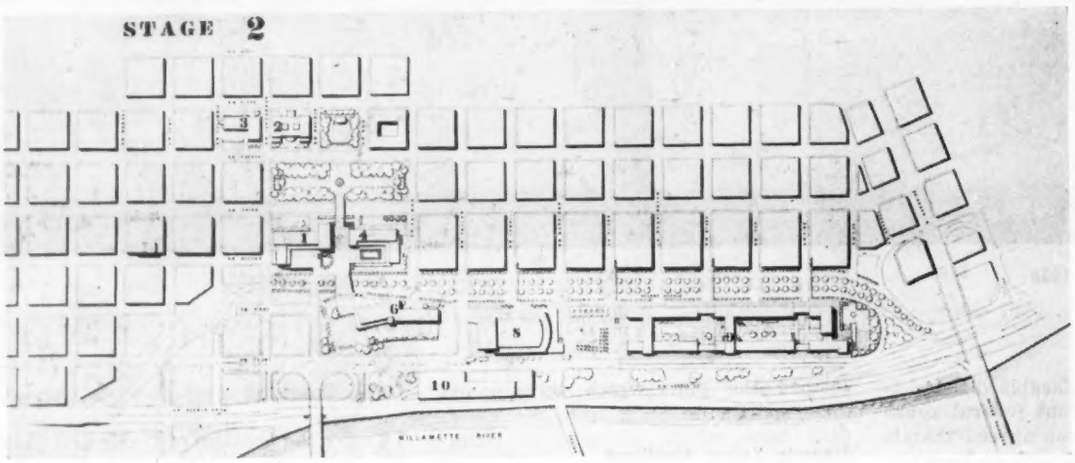
Assuming that property values after the war were to go down at the same rate as they traveled from 1930 to 1940, it was estimated that the Civic Center development would have to stabilize values for a period of only 8 years in order to bring tax revenue up to and slightly beyond what would be lost if the development were not built (see graph). Leading realtors of the city have been consulted and they are convinced that even greater improvement in property values would probably result.

Traffic Unsnarled

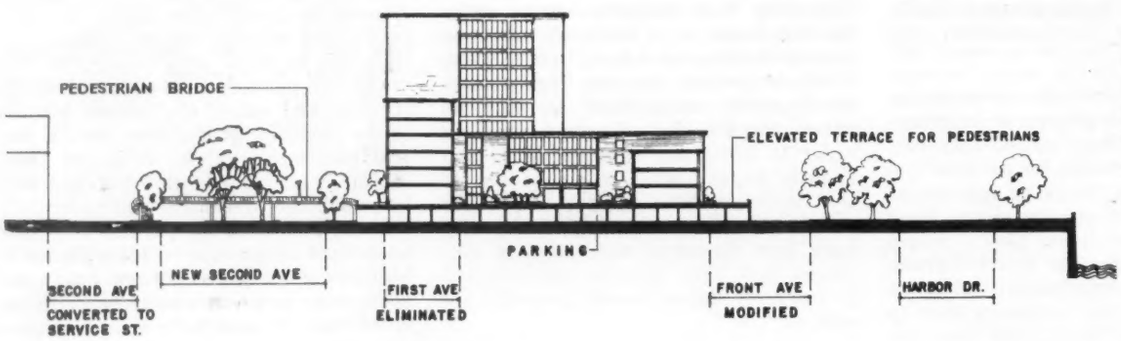
To solve the problem of traffic and parking, it is proposed that a new Second Avenue be constructed about 100 feet east of the existing Second Avenue, and that this be made wide enough so that traffic can move with considerable facility into and out of the streets leading to the commercial buildings in the central commercial area. It is the Commission's recommendation that the land on which the present Second Avenue is built be then used for parking lots until such time as private builders desire to build on them. The City could then sell them back to private builders, with the restriction that parking space equal in







Development of Portland's Civic Center by successive stages



Section through part of development shows buildings raised to permit parking beneath

PROPOSED FEDERAL BUILDINGS

amount to that which would be displaced by using the land now occupied by these parking areas would be provided somewhere in the new structure. Real estate operators believe that the longer blocks created by the proposal would be beneficial. The new Second Avenue would be tied in to the new Harbor Drive development by underpasses where necessary.

After considerable discussion with the State Highway Commission and the City Traffic Engineer, the Commission arrived at a plan for the development of a traffic artery bounding the southern extremity of the commercial section. As first proposed, this artery embodied the simple widening of Clay Street. However, the Highway Commission recommended that it should be developed as a depressed way for several reasons: traffic would be increased a great deal along Canyon Road as a result of the construction of the proposed new Wolf Creek Highway; the ultimate building of a new Hawthorne Bridge, with improved approaches on both east and west sides, would increase the amount of traffic using this bridge and necessitate a more efficient traffic route than exists at the present time; placement of this artery at Clay Street would make it possible to build the new Hawthorne Bridge so that it would come at right angles to the river channel, as insisted upon by Army Engineers.

In addition, this improvement would encourage, to the south of the new parkway, the erection of apartment houses and other multiple unit residential construction, protected from commercial encroachment but convenient to downtown Portland. The new parkway would take the place, at much less cost, of the proposed Jefferson Street tunnel.

Bold Solution of the Parking Problem

As a recommended partial solution of the parking problem in downtown Portland, the Commission proposed that all buildings of the Civic Center be built on terraces, with parking facilities underneath (at present ground level). This plan has met with enthusiastic support by the governmental agencies represented in this area, as well as many local people. The cost as estimated by the engineers of the Department of Public Works seems reasonable. This plan, with the addition of the proposed parking facilities on the east side of the new Second Avenue, would provide somewhere between 4,000 and 4,500 parking spaces.

Building Design

As to the buildings shown on the model, their architectural design and landscaping are merely suggestions, to be revised as necessary in the detailed plans. However, a governing idea is that an informal rather than a formal type of development would be in better keeping with the necessity of erecting these buildings one or more at a time over a long period of years. The three proposed major stages of construction are shown across page.

Ewing Galloway

Top, model of proposed development; below, shown in light gray, the buildings it would displace.

And the Cost

Economically the plan appears to be sound. Property on which it is suggested that the development be located is comparatively cheap—approximately $5,000,000 to purchase. It is estimated that the City could recoup anywhere from $2,000,000 to $4,000,000 of this money by resale of land to the Federal Government, the State, and to some of the other agencies for buildings going into the area. The sale of the land adjacent to the west side of new Second Avenue would amount to anywhere between $1,000,000 and $2,000,000 according to general estimates of local real estate people. The site for the Federal group can be sold for considerably more than $1,000,000; the State building site for some $250,000.

It is the recommendation of the Planning Commission that all existing structures shall remain until such time as new improvements are to be constructed, and that whatever revenue the city gets for them be used to help pay for the project as it develops.

Wide Approval Already Won

This report has been approved by the Portland City Planning Commission, by the Oregon Chapter of the A.I.A., the Oregon Building Congress, the Portland Area Postwar Development Committee and the City Council of Portland. The approval, of course, is in principle rather than in detail. The Commission believes, however, that there are certain essentials of this plan which must be retained in order to make it a valuable contribution to the future development of Portland.

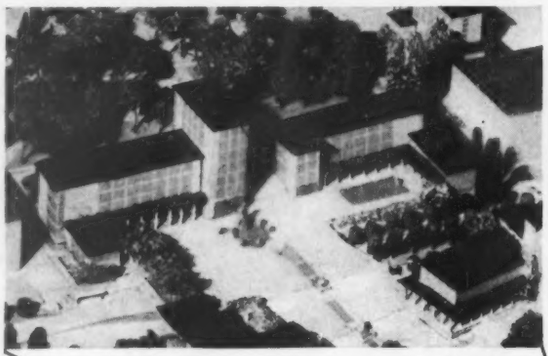
The proposed widening of Second Avenue is one of these essentials. It is essential from the standpoint of improving the traffic system of downtown Portland, of stabilizing and improving property values adjacent to the Civic Center development, and both as a provision for an adequate setting for civic buildings and as a necessary open space adjacent to Portland's congested downtown area.

Another proposal, essential if the city is to have an efficiently operating Civic Center, is the provision for parking space underneath the terrace on which the buildings are to be built.

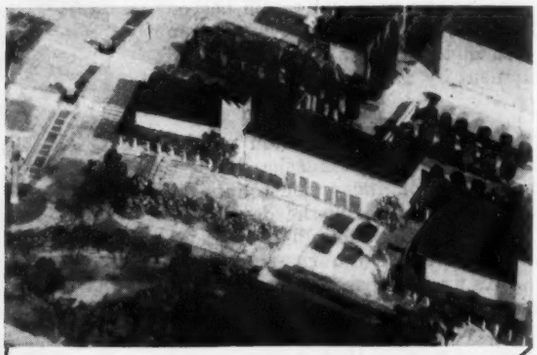
These phases of the plan are the ones which need the greatest protection against change. Otherwise there is considerable flexibility.

The Commission feels that this should become the plan of the citizens of Portland as well as of those groups who have already taken action upon it. Otherwise, it is in danger of being shelved as so many plans have been in the past. "Planning," says the Commission, "must be a healthy function of the local government, one for which every citizen feels as much personal responsibility as he does for electing his government representatives, and for carrying out other public measures of interest to him as a citizen. Only by working together as a community can we attain the full benefit of becoming a city of beauty and accomplishment."

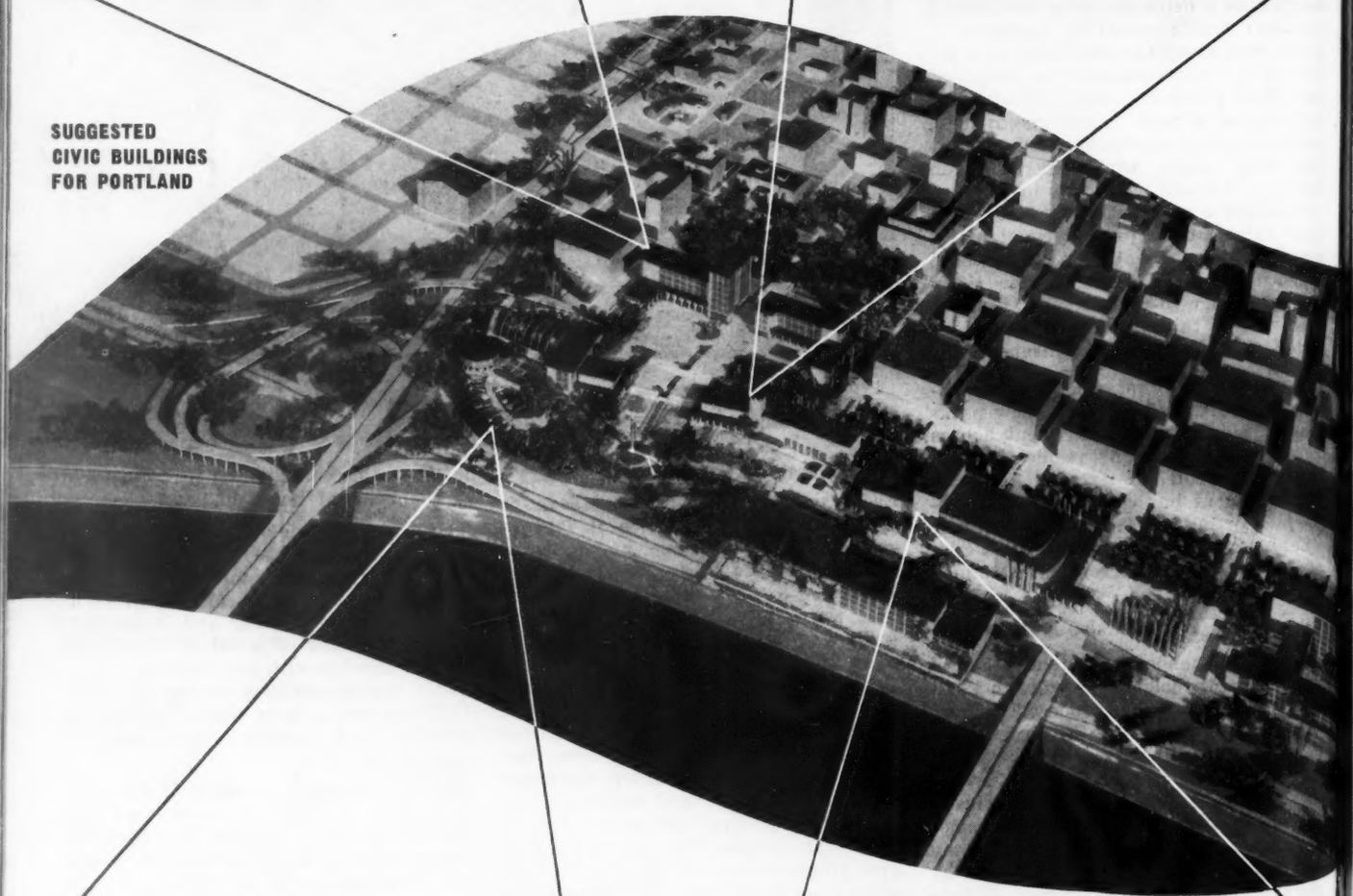
City Hall and State Building. *Present City and State Buildings woefully inadequate, with numerous offices housed outside. Proposed new City Hall provides two to three times present space; new State Building would coordinate all local activities.*

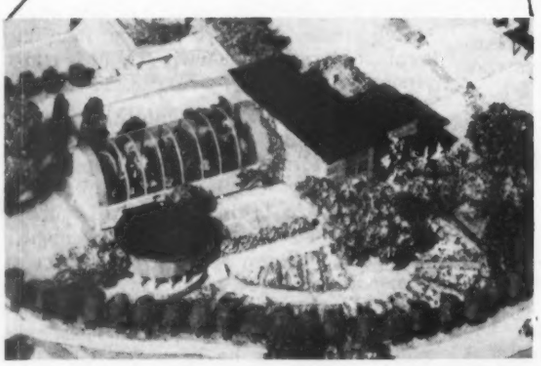


Museum. *Portland is very much in need of a museum to house and exhibit the material of the Oregon Historical Society and the Battleship Oregon Society, together with geological, commercial, and industrial displays.*

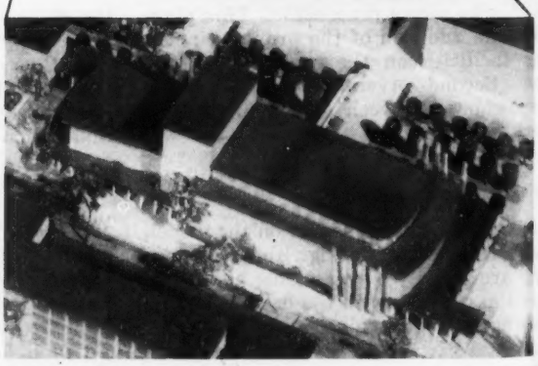


SUGGESTED CIVIC BUILDINGS FOR PORTLAND





Horticultural Center. *For years, Portland has been favorably known as the City of Roses; but there is no reflection of this interest downtown. The proposed building and public gardens offer a remedy.*



Music Hall and Theater. *Designed to replace poor auditorium facilities that exist at present. To be used for all large gatherings. Adequate parking is provided beneath the building terrace.*

PRESERVATIVES for Wood, Continued

METHODS OF TREATMENT—Assuming that the wood is first of all properly prepared for treatment and free from decay, the selection of the proper method of treatment is quite as important as the selection of proper preservative. Sufficient absorption and penetration of the preservative to give the wood thorough protection for its intended use is necessary. Methods of treatment are classified as 1) pressure treatment, and 2) non-pressure treatment.

Pressure treatments have been definitely established by experience covering a long period of years as superior in obtaining maximum service against decay and insect attack. Pressure treatments consist of empty-cell and full-cell processes. Empty-cell treatment should be used with oil preservatives except when the retention specified is greater than can be obtained by an empty-cell process. Preservatives in water solution may be injected by either a full-cell or an empty-cell process.

The empty-cell process consists of admitting preservative into the treating cylinder. The treating pressure is then raised and at the end of the pressure period the preservative is drained from the cylinder and a final vacuum removes the surplus preservative from the wood.

The full-cell process is used when the retention of a maximum quantity of preservative is desired. First, a vacuum removes as much air from the cylinder and the wood as is possible. The preservative is then admitted without the admission of air. Pressure is then applied until the required absorption is obtained.

Non-pressure treatments should not be used for maximum service when it is practicable to use pressure treatments. Hot-and-cold-bath open-tank treatment gives the best penetration of the non-pressure methods.

In the hot-and-cold-bath treatment, the wood is heated in the preservative in an open tank, forcing out some of the air in the wood cells. The wood is then plunged into a tank of cold preservative and the partial vacuum in the cells that is thus created forces the liquid in the wood by pressure of the atmosphere. Creosote and water-soluble preservatives that are not adversely affected by heating can be used in this treatment.

Brush treatment and spraying should be applied in at least 2 coats. Penetrations obtained will usually be less than 1/16". Brush and spray treatments are used on surfaces cut after treatment. However, it is more practical than is commonly supposed to design wood structures so that all cutting, framing and boring of holes may be done before treatment.

RECOMMENDED PRACTICE—For protection against decay and against subterranean termites and dry-wood termites, the following recommendations are those of the Wood Preservers Association, according to location and use:

1. IN CONTACT WITH THE GROUND

Footings	Mud sills	Plates
Foundation timbers	Pillars	Posts

These and other members should be pressure treated with coal-tar creosote by the empty-cell process with a net retention of not less than 8 lbs. per cu. ft.

2. NOT IN CONTACT WITH THE GROUND

Bridging	Partitions	Sills
Coal bins	Pillars	Sleepers
Door casings	Plates	Stairs
Door frames	Porches	Steps
Footings	Posts	Studding
Foundation timbers	Rails	Sub-flooring
Headers	Sheathing	Window casings
Joists	Siding	Window frames

These and other members up to and including the first floor subfloor should be pressure treated with one of the following approved preservatives:

Preservative	*Minimum Retention lb. cu. ft.*
Coal-tar creosote	8.00
Chromated zinc chloride	0.75
Wolman salts (Tanalith)	0.35
Zinc chloride	1.00
Zinc meta arsenite	0.35

Where decay exposure is unusually severe, or where dry-wood termites prevail, the protection of these and additional members above the first floor subfloor may be necessary through the extended use of pressure treated lumber.

3. NAILING STRIPS

All nailing strips embedded in concrete or masonry should be pressure treated. Retentions of the various preservatives should be in accordance with Paragraph 2, except that for coal-tar creosote the retention should be not less than 6 lbs. per cu. ft.

COST—Cost of treatment will vary with the size of the job, distance from a source of supply and various other factors. The following prices for pressure impregnation must be regarded only as average approximations and should by no means be taken as a basis for any estimates to an owner. Prices are for treatment only and are f.o.b. the manufacturer's plant.

Salt treatment, 1 lb. per cu. ft.....$20 to $25 per M bd. ft.
Creosote, 6 to 8 lbs. per cu. ft.....$30 to $33 per M bd. ft.
Piles, ASTM 12-lb. treatment.....25¢ per linear ft.

Some preserving companies do not accept orders in small amounts so that the use of pressure treated timber on smaller buildings may involve locating a source of supply. Many companies do, however, make available any quantity of treated lumber from one piece up.

REFERENCES—A.I.A. File Nos. 19E95 and 19A3 for Wood Preservation.

List of Publications on Wood Preservatives, L02-704, Forest Products Laboratory, Forest Service, Madison, Wisc.

Effectiveness of Wood Preservatives in Preventing Attack by Termites, by Thomas E. Snyder and James Zetek, U. S. Dept. of Agriculture Circular No. 683, Superintendent of Documents, Washington, D. C., 10¢.

Federal Specifications for Wood Preservations, Federal Standard Stock Catalog Procurement Div., Sec. 4 (Pt. 5), Nos. 531, 546, 551, 556a, 560, 561a, 568, 571b, 573, 576a, and 581, U. S. Treasury Dept.

An International Termite Exposure Test, by G. M. Hunt and T. E. Snyder, 13th Progress Report, 1942, American Wood Preservers Association.

Manual of Preservative Treatment of Wood by Pressure, by J. D. MacLean, 1935, Agriculture Miscellaneous Publication 224, No. A 1.38:224, Superintendent of Documents, Washington, D. C., 15¢.

Manual of Recommended Practice, American Wood Preservers Association, 1427 Eye St. N. W., Washington, D. C.

TRADE ASSOCIATION—American Wood Preservers Association, P. R. Hicks, Secretary-Manager, 111 West Washington St., Chicago 2. Field offices: J. F. Seiler, Engineer, 1427 Eye Street N. W., Washington 5, D. C.; W. A. Stacey, Engineer, Lawrence, Kansas; Ralph H. Mann, Engineer, 60 East 42nd Street, New York 17.

SOURCES OF SUPPLY—Omission of any manufacturer from this list emphatically is not to be construed as an indication that the omission is because his product in any way lacks merit.

Advance Creo. & Chem. Co., Suffolk, Va.
American Creosote Wks., New Orleans
American Lmbr. & Trtg. Co., Chicago
Appalachian Wood Pres. Co., Huntington, W. Va.
Baker Wood Pres. Co., Marion, O.
J. H. Baxter & Co., San Francisco
Benson Lumber Co., San Diego
H. A. Browning Lmbr. Co., Los Angeles
Brown Lmbr. & Creo. Co., Sheldon, Tex.
Cascade Pole Co., Tacoma, Wash.
Celcure Wood Pres. Corp., Jacksonville, Fla.
L. A. Clarke & Son, Wash., D. C.
Colfax Lmbr. & Creo. Co., Colfax, La.
Colonial Creosoting Co., Louisville, Ky.
Columbus Creosoting Co., Columbus, Ind.
Commercial Creosoting Co., Longview, Tex.
Commercial Wood Pres. Co., Terre Haute, Ind.
Crosby Lmbr. & Mfg. Co., Crosby, Miss.
Denkman Lmbr. Co., Hammond, La.
Durable Wood Pres. Co., Charlotte, N. C.
Eppinger & Russell Co., New York
Florida Wood Pres. Co., Pensacola
Forest Prod. Co., Portland, Ore.
Gulf Wood Pres. Co., Fernwood, Miss.
Gulfport Creosoting Co., Gulfport, Miss.
Indiana Wood Pres. Co., Chicago
International Creosoting & Constr. Co., Galveston, Tex.
Gennison-Wright Corp., Toledo
Joslyn Southwest Co., Dallas
Keystone Wood Pres. Co., Phila.
Lincoln Creosoting Co., Shreveport, La.
Long-Bell Lmbr. Co., Kansas City, Mo.
Wm. C. Meredith Co., Atlanta
Miami Wood Trtg. Co., Coral Gables, Fla.
T. R. Miller Mill Co., Brewton, Ala.
T. J. Moss Tie Co., St. Louis
Page & Hill, Minneapolis
Piedmont Co., Staunton, Va.
Protexol Corp., Kenilworth, N. J.
Republic Creosoting Co., Indianapolis
W. J. Smith Wood Pres. Co., Denison, Tex.
Somers Lmbr. Co., Somers, Mont.
Southern Creosoting Co., Nacogdochas, Tex.
Southwestern Creosoting Co., Muskogee, Okla.
Tampa Lmbr. & Creosoting Co., Tampa, Fla.
Taylor-Colquitt Co., Spartanburg, S. C.
Texas Creosoting Co., Orange, Tex.
Tri-State Creosoting & Terminal Corp., Ceredo, W. Va.
United Creosoting Co., Houston, Tex.
Warren Southwest Co., Wilmington, Calif.
J. I. Wells Co., Salisbury, Md.
West Coast Wood Pres. Co., Seattle
Wood Pres. Div. of Koppers Co., Pittsburgh

PRESERVATIVES for Wood

NOTE—The material in this BPF has been drawn largely from publications of the United States Department of Agriculture, Forest Service. These publications and others appear in the list of references over-page.

DESCRIPTION—The life of wood placed under conditions favorable to decay, attack of insects or marine borers, can be considerably extended by treatment with suitable preservatives. The penetrability of preservative varies considerably with various species. Sapwood is more easily penetrated than hardwood. Treatment does not appreciably affect the ultimate strength of woods. Some few woods, such as all heartwood of Southern cypress and the butt section of redwood, have a natural decay resistance without preservative treatment.

Some preservatives are more effective than others. All possess certain disadvantages that limit their use, as well as advantages that make them especially suitable for specific purposes. The preservatives fall into 3 general classes:

1. Those commonly called "preservative oils," which are relatively insoluble in water.
2. Salts injected into the wood in the form of water solutions.
3. Toxic material combined with a solvent, usually volatile, other than water.

PROPRIETARY TREATMENTS—Many wood preservatives are sold under various trade names. It is unwise to accept any preservative sold under a trade name without knowing the kind and amount of preservative chemicals contained in the mixture.

PRESERVATIVE OILS—Preservative oils are ordinarily used in posts, poles, ties, and any material that will be in water, in contact with the soil, or in any other situation where high-moisture conditions prevail. If oil-treated material is to be used in buildings or where bleeding is especially undesirable, only straight creosote should be used.

Coal-tar creosote is the most important and most generally useful wood preservative. Coal-tar creosote is a black or brownish oil made by distilling coal-tar. The character of the various coal-tar creosotes available may vary considerably but satisfactory results may be expected from any good grade.

The advantages of coal-tar creosote are: (1) its toxicity to wood destroying fungi and insects, (2) its relative insolubility in water and its low volatility which impart to it a great degree of permanence under the most varied conditions, (3) its ease of application, (4) the ease with which its depth of penetration can be determined, and (5) its general availability and low cost.

For some purposes coal-tar creosote has properties that are a disadvantage. Freshly creosoted timber can be ignited and will burn, producing a dense smoke. After seasoning, however, the creosoted wood usually is but little, if any, easier to ignite than sound untreated wood, and less flammable than untreated but decayed wood.

Creosoted wood can be used in sills and foundation timbers, floor sleepers embedded in or resting on concrete, and even sub-flooring, with little danger of objection to the slight odor when freshly treated. Foodstuffs that are easily affected by odors should not be stored near creosoted wood.

Workmen sometimes object to the handling of creosoted wood because it soils clothes and may burn the skin, causing an effect similar to sunburn. Gloves and/or grease furnish protection against creosote burn.

It has been regarded as impossible to paint over creosoted wood but recent investigations indicate that some type of aluminum paint primer may be developed to secure satisfactory paint receptivity.

Other preservative oils consist of coal-tar and creosote solutions, creosote petroleum solutions, coal-tar distillates and various toxics in oils. These have not found wide use in building construction because of cost, lack of effectiveness, lack of service test records, or other reasons.

WATER SOLUBLE SALTS—Inorganic salts and similar materials that are used in water solutions as wood preservatives are zinc chloride, acid cupric chromate, chromated zinc chloride, Wolman salts Tanalith, zinc meta arsenite and others. Preservative salts are ordinarily used in buildings where oil-treated wood is unacceptable because of odor, color, oily surface or unsatisfactory paintability. Salt preservatives are not to be used where marine borers are present and their use should be avoided for wood that will be in contact with the ground, in fresh water, or under other high-moisture conditions.

All salt-treated lumber for use in building or other places where high moisture content or shrinkage after installation would be a disadvantage, should be air dried or kiln dried after treatment and before use, to a suitable moisture content.

Zinc chloride was at one time the most largely used water soluble preservative but the poundage has decreased in favor of other types. It is not patented, it is inexpensive, it is uniform in quality, readily available. Wood treated with it can be painted. Like other water soluble salts, zinc chloride will leach out of treated timber if exposed to the soil moisture or rain and is, therefore, not recommended for timbers in contact with the ground. For outdoor use it is less effective than coal-tar creosote, but when painted it gives excellent results.

Chromated zinc chloride consists of approximately 18% of sodium bi-chromate and 82% commercial zinc chloride. It is not a patented preservative although there is a patent covering a method of preparing it. Like zinc chloride, chromated zinc chloride is intended for timber used above ground where it will not be wet or where it must be painted. Chromated zinc chloride reduces flammability in wood and the reduction is increased as higher concentrations are used.

Wolman salts comprise a group of patented preservatives, all essentially fluoride-phenol mixtures which vary considerably in composition, one of which is Tanalith U. This is said to consist of sodium fluoride, sodium chromate, di-sodium arsenate and dinitrophenol. Treatment leaves the wood odorless, clean and paintable.

Zinc meta-arsenite is a patented wood preservative sold under the name of ZMA. Treated wood is odorless, clean and paintable. It has given good service in the tropics when used above ground.

Other water-soluble preservatives include sodium fluoride, mercuric chloride, copper sulfate, and patented mixtures called Ac-zol and Celcure, all of which are toxic.

TOXIC MATERIAL IN NON-AQUEOUS VOLATILE SOLVENTS—This group of preservatives meets the need for a clean treatment that will not swell the wood but will leave it odorless and paintable. Many are sold under trade names.

Some of these preservatives are used for window sash, frames, and doors, and in the treatment of flooring, furniture and millwork exposed to fungus and termite attack.

LOCAL SERVICE — Fill in the blank spaces provided below with the names of manufacturers' local representatives who can help in problems involving this product.

Product _____
Local Agency _____
Representative _____
Address _____
Telephone _____

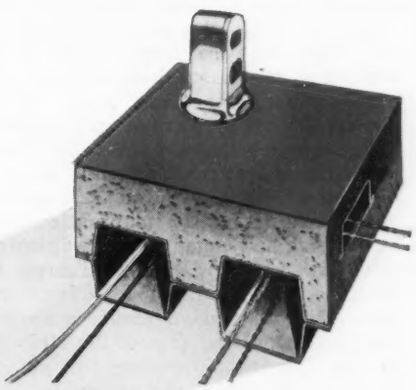
Product _____
Local Agency _____
Representative _____
Address _____
Telephone _____

Product _____
Local Agency _____
Representative _____
Address _____
Telephone _____

These data represent accepted practice in manufacture but do not necessarily mean that such products are currently available for civilian use.

SPECIFICATION:

Client to rearrange partitions and electrical outlets after occupancy.



Q-Floors enable you to assure clients that electrical outlets, lights and partitions can be easily relocated as often as changing conditions dictate.

From the architect's point of view, this avoids some of the worst headaches in the business.

Q-Floors are constructed so that an electrician can drill anywhere, anytime and set up electrical outlets six inches apart. A new outlet takes only a few minutes, requires no trenches, no muss or fuss.

A building with Q-Floors is ready for any electrical emergency the day it is completed and as long as it lasts. Floor plans remain fluid. Changes can be made *quick*. Q-Floors help keep a building in pace with increasing mechanical demands.

Structurally, Q-Floors have advantages, too.

No wet materials hold up progress; no shoring, no forms. Two men can lay 32 square feet of Q-Floor in thirty seconds. The installation is quiet, clean, fireproof. The Q-Floor immediately becomes a working platform for all other trades. The floors can be completed almost as soon as the structural frame, which, incidentally can be lighter, because Q-Floors are light in weight. All these factors contribute to reducing building time from 20 to 30%.

And there are still other favorable factors —cost for one. Despite the immediate and continued advantages of Q-Floor, cost stacks up well with "average appropriation". For detailed information write for Q-Floor literature, or a Robertson representative will gladly call on you. Electrical Fittings for use with Robertson Q-Floors are available through General Electric construction materials distributors.

Reviews

Books

Periodicals

Bibliographies

SHALL COMMUNITIES BE FROZEN OR RENEWED?

American Planning and Civic Annual. *Edited by Harlean James, published by the American Planning and Civic Association, 901 Union Trust Building, Washington, D. C. 1943. 202 pp. $3.00.*

Planning, 1944. *Proceedings of the Annual Meeting, American Society of Planning Officials, 1313 East 60th Street, Chicago, Ill. 1944. 240 pp.*

Planning is a sorely abused word. Everyone seems to have his own conception of what the word implies and to attack or advance "planning" accordingly. Besides the dichotomy of those opposed to any planning, as being an infringement upon sacred individual liberties, and those who believe in planning, as a means for increasing the individual's enjoyment of life, there is a further disagreement on the scope of the planner's actions. This is due mainly to a lack of understanding of, or to a lack of education to the sociologic bases of town and country planning on the part of those commonly (and often officially) entitled "planners."

The basic problems, which *must* be solved before specific construction is planned, have been ignored too long. Though his titles are somewhat misleading, Eliel Saarinen has pointed up the distinction between the varying points of view by distinguishing between "town-planners" and "town-builders." To Saarinen, "town-planners" are those who have concentrated upon the physical plant of the city—its highways, parks, water supply, etc. These are the men who have been in positions of government up to now. He groups the men of broader conception as "town-builders"; to these belongs the dominant role of the future. They consider the environment as a whole, as a product of the sociological factors created by man, as a part and parcel of the studies of economics and psychology.

Much of the history of planning in recent years—and it has been the type that Saarinen would call "town-planning" rather than "town-building"—has been recorded in the pages of the planning annuals: the *American Planning and Civic Annual* (of the American Planning and Civic Association) and *Planning, 1944* (of the American Society of Planning Officials). With the quickening interest in the subject, these volumes are assuming greater importance than ever before.

The *Planning and Civic Annual* for 1943 contains thirty-seven articles under four headings: "The Nation," "Western Public Works," "In the States," and "In the Cities." The first begins with a general discussion of the role of free enterprise in America. This is followed by a group of articles on National Resources and as in the remainder of the volume the emphasis is upon natural resource industries and recreation. The other three topics in this section, "Highways," "Housing," and "Federal City" are stimulatingly discussed. It is a sorry fact that there is insufficient activity to warrant a yearly series of articles, similar to the Washington papers presented here and in past issues of the Annual, on planning in every state and in our larger cities.

"Western Public Works" takes planning from the zoning and paving level into the broad field of regional planning commensurate with the vastness of our country. While the areas involved in the West may be larger than those studied in the East, there is a conceptual maturity in these plans which dwarfs limited projects of only vaguely integrated sewerage, road, school, and recreational systems. Clifford H. Stone's discussion of "Water Compacts of the West" reminds us that our nation does have legal instruments for facilitating interstate planning. M. Q. Sharpe, in "Future of the Missouri Valley," relates the progressive plans made for that well populated area of the Midwest to the remarkable experience gained in the Tennessee River valley.

"In the States" reviews planning commission work in several western states, where again the problems are large-scale. All too frequently at this political level there is still an inertia toward taking the initiative for broad planning.

State parks are discussed and, together with the reports of the state groups, these papers present potent arguments for bigger plans, wider scopes, and more advanced thinking. F. T. Schwob's "Parks and Recreation from the State's Point of View," surveying the experience in his own state of Iowa, indicates that the creation of recreational areas and lakes presents problems far greater than commonly considered. Iowa found its recreational facilities often required great expansion of the duties of the Conservation Commission to maintain water flow, plant and animal life, and to meet increasing park use. Schwob points out that wider planning in the beginning would have prevented much hindsight patching.

The final section, "In the Cities and Towns," is regrettably short but contains valuable articles, especially that by Walter H. Blucher on the problems of "Urban Redevolopment." He covers the various economic considerations involved in rebuilding our cities and making urban life so attractive that the exodus from our cities may be halted (or even reversed). Like Hugh Potter, of the Urban Land Institute, arguing the "Need for Federal Action in Rebuilding Cities," Mr. Blucher recognizes that Federal funds are required to finance these plans.

The 1944 edition of *Planning*, the annual of the A.S.P.O., concentrates more on city planning than does the *Civic and Planning Annual.* The keynote is sounded by David E. Lilienthal's "The People's Stake in Planning." The chairman of TVA is as strong a believer in Big Plans and "grass roots" as ever. But it is regrettable that reports of representatives from planning groups up and down the country indicate slight grasp of the significance of the success —physical and social—of a regional development like TVA. It is equally unfortunate that the planning groups seem more concerned with "planning now" than with preparing master plans, but holding back building until the direction is more clear (local government construction to be a very small percentage of total work in the building trades).

The reports are printed in several categories: cities over 300,000 population, cities under 50,000 population, and cities between. A worth-while development which is on the increase is the formation of citizen committees to cooperate with and often to activate the governmental planning boards.

Both annuals present the interesting repetitive picture of planning processes in numerous political subdivisions of the United States—each is planning its sewers, new parks, new roadways, and its new civic centers. Many are planning *the* great air center for the post-war era so that we may end with a score or more cities boasting international air travel facilities but without that much travel.

In almost no place is any plea made for a larger coordinating agency. Though credit is here and there given the late National Resources Planning Board for its aid in framing various ordinances, each planning agency seems to be going about its plans with only half an eye (at most) cocked toward the national picture. Most of the plans presented will serve only to freeze communities into their present uncomfortable moulds; few consider the economic and physical changes which must be made to transform their localities into efficient, comfortable, and inspiring places for work and play—for living. The "planning" presented is necessary work, but should be based upon broader plans so that there will be less need for undoing in the future.

RITA DAVIDSON AND WILLIAM SMULL

MAPS IN THE FIELD

The Technique of the Terrain. *Maps and Their Use in the Field in Peace and War, by H. A. Musham. Reinhold Publishing Corporation, 330 West 42nd Street, New York 18, N. Y. 1944. 234 pp. $3.85.*

Mr. Musham's book may, at first glance, seem more like a concise review text for one already fairly familiar with the

(Continued on page 108)

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Reviews

(Continued from page 106)

field use of maps; but with a little pencil work and careful following of the text it can teach the subject even to a novice. Map construction and study are discussed, including determination and representation of direction, distance, relief, and slopes.

There is also a valuable chapter on aerial photography and the last three chapters emphasize the military applications of map study. It should prove especially helpful to those among the armed forces who must gain a great deal of knowledge in a short time in order to use maps intelligently. Problems are well worked out and clearly diagrammed throughout the book.

DIRECTORY OF PLANNING

Postwar Planning in the United States, *An Organization Directory, 3. Published by The Twentieth Century Fund, 330 West 42nd Street, New York 18, N. Y., 1944. 151 pp. $1.00.*

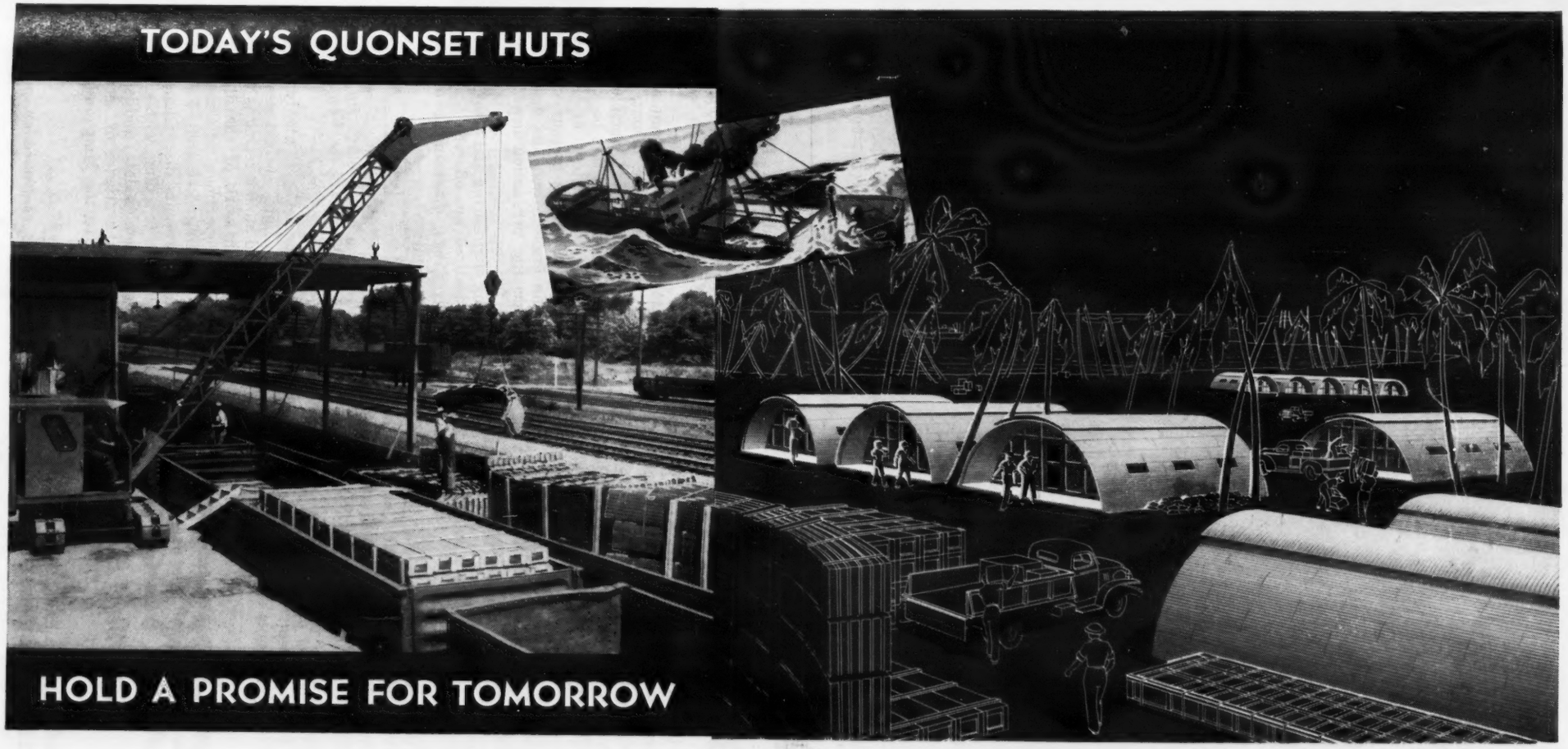
Studies of postwar problems in the United States, by 200 private and governmental agencies of national scope, are described in this survey, the third in a series. For each organization listed, the directory briefly describes the aims and background of the agency, its means of financial support, lists the executive personnel, and describes current postwar projects and publications. Among major fields of interest on which these agencies are working are: international and regional problems; postwar industrial, agricultural, and financial questions; educational and public discussion activities; health, medical, and relief facilities; housing, and urban and rural development; transportation, labor, and general social and economic problems.

Blueprint Reading for the Building Trades. *By Joseph E. Kenney. McGraw-Hill Book Co., Inc., 330 West 42nd Street, New York 18, N. Y., 1944. 96 pp., 31 plates. $2.00.*

Based on the author's 18 years of architectural office experience, as well as several years of teaching, this book explains what blueprints are, their importance, how the architect prepares working drawings, who uses them, and how to learn to read them. The text covers first, second, and third class construction, and includes plumbing, heating, electrical, and structural layouts, together with specifications. A glossary of architectural and building terms is given.

(REVIEWS *continued on page 110)*

TODAY'S QUONSET HUTS



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Reviews

(Continued from page 108)

FOR AIRPORT PLANNERS

Airport Engineering. *By H. Oakley Sharp, G. Reed Shaw, and John A. Dunlop. John Wiley & Sons, Inc., 440 Fourth Avenue, New York, N. Y., Chapman & Hall, Limited, London, 1944. 150 pp., 253 illustrations. $5.00.*

For engineers who are planning future commercial and private flying fields, this book offers data on airport sites and sizes, grading, drainage, soil stabilization, building design, pavements, lighting, construction materials and maintenance, etc. Detail drawings, diagrams, charts, illustrations, and tables are included.

Airport Design. *U. S. Department of Commerce, Civil Aeronautics Administration, Washington 25, D. C. April 1, 1944.*

A comprehensive primer of standards for airport design, this publication discusses site selection, design data, and types of plan and construction for airports.

Aircraft Production Illustration. *By George Tharratt. McGraw-Hill Book Co., Inc., 330 West 42nd Street, New York 18, N. Y., 1944. 201 pp., illustrations. $3.50.*

A text and reference manual for students in perspective layout, technical sketching, and basic principles of production illustration, this book gives an account of the history of production illustration, and its present and future roles in organization and operation of fast-moving production lines. Suggestions for introducing this method into existing engineering and manufacturing organizations are offered. Includes detail drawings, diagrams, photographs, graphs, charts.

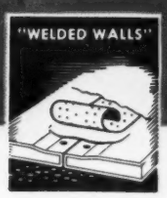
Light, Vision and Seeing. *By Matthew Luckiesh, D.Sc., D.E. D. Van Nostrand Co., Inc., New York. $4.50.*

Simplification of the highly complex subject of light, brightness, vision, lighting, and human seeing is the theme of this 24th work of the director of the Lamp Department of General Electric's Lighting Research Laboratory. The book presents discussions on controllable aids to seeing, with simple diagrams of complex data, and is designed to present the science of seeing as a contribution to the lamp and lighting industry.

(REVIEWS *continued on page 112)*

A MILLION FIRES

that "might have been"



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Reviews

(Continued from page 110)

THE SOLAR PRINCIPLE

The Solar Home *as created by George Fred Keck. Consumer booklet published by Green's Ready-Built Homes, 1221—18th Avenue, Rockford, Ill. 12 pp., illustrated.*

Again we borrow from the Greeks, not pediments and columns this time, but the timeless solar principle, straight from Socrates, who said, ". . . we should build the south side (of the house) loftier to get the winter sun, and the north side lower to keep out the cold winds. . . ." *(Xenophon's Memorabilia).* This booklet presents to some degree the history of the modern solar-type house, dating from George Fred Keck's "stumble" on the principle of orientation for living comfort when building his "Home of Tomorrow" at the 1933 Chicago Century of Progress Exposition. Advantages of orientation and prefabrication from both economic and psychological points of view are coupled in clear, orderly fashion—which would seem easily digestible to the prospective home-builder (the booklet might be a good one to whip out when a client asks about these things). The solar principle is illustrated by diagrams, with plans and elevations of suggested types of prefabricated homes incorporating it, and several photos of interiors. Dwellers in these solar houses add their enthusiastic recommendations.

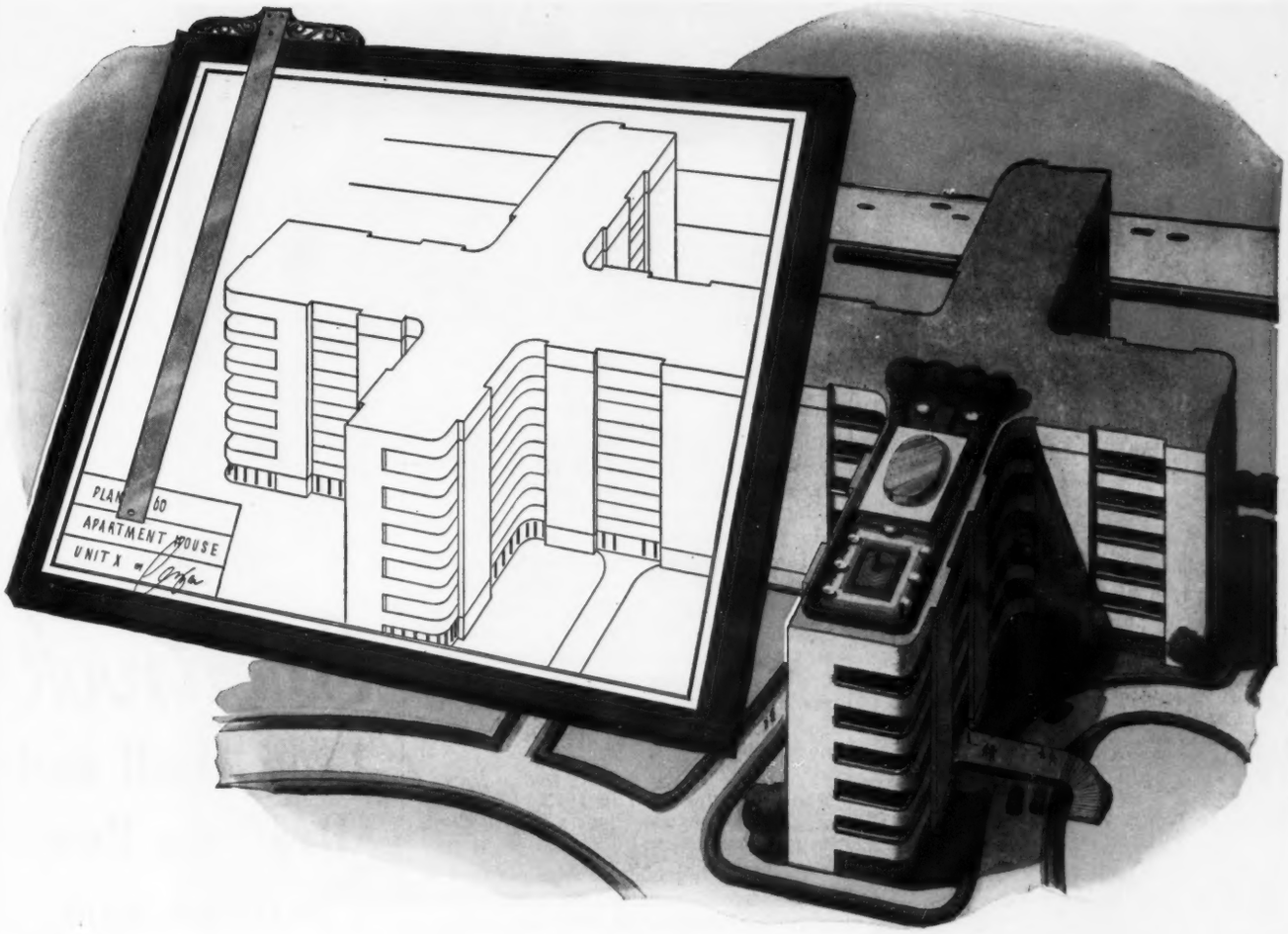
PLANNING REPORTS

Reviewed by Margaret Greenough King

Wanted! A Plan! *Post War Development Report Submitted by the Royal Australian Institute of Architects.*

A preliminary report on organization for planning in Australia. That the framework for a progressive planning body is ably drawn can be seen from this description of its activities—"its task to be continuous planning, not the formation of a fixed plan." As concerns the building industry and its part in Australian development after the war, it is anticipated that a gradual release of materials will facilitate the re-training of tradesmen and that prefabrication will help fill the gap in building created by the war. A research body is strongly advocated, to foster the appropriate use of the many new materials and methods of construction. Building codes involving rigid control of land costs and use are to be devised. Since

(Continued on page 114)



Tomorrow's "No-Vacancy" Buildings

are on Architects' Drawing Boards Today

Tenants' demands have a great deal to do with the building and modernizing plans that many an owner has commissioned his architect to prepare, today.

Tenants want air conditioning! That was evident long before war cut off the supply of equipment for civilian use.

Undoubtedly you have your share of postwar building planning under way . . . and attach proper importance to Modern Air Conditioning, as you consider the problem of full-time rentability.

Modern Air Conditioning means Westinghouse—and its years of pioneering research and engineering experience.

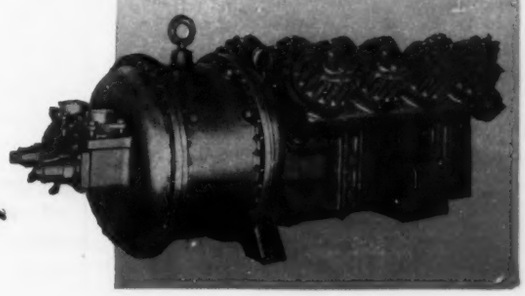
For essential war uses in factories, hospitals, airports, military bases, etc., Westinghouse Air Conditioning and Industrial Refrigeration Equipment is available today.

For executives, architects and engineers now planning postwar building and modernizing, dependable data and competent application engineering assistance are ready.

Phone your nearest Westinghouse office, or write on your letterhead to Westinghouse Electric Elevator Company, 150 Pacific Avenue, Jersey City 4, New Jersey for your copy of a new booklet, "How To Plan Your Postwar Air Conditioning Today."

HERMETICALLY-SEALED FOR DEPENDABILITY

Westinghouse pioneered the Hermetically-Sealed Compressor. Hermetically-sealed means light weight • small size • low maintenance and operating costs • high efficiency • long life.



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PLANTS IN 25 CITIES . . OFFICES EVERYWHERE

Air Conditioning

Westinghouse presents John Charles Thomas • Sunday 2:30 E. W. T., N. B. C.
Ted Malone • Mon. Wed. Fri. 10:15 E. W. T., Blue Net.

TO KEEP AWAY FROM RUST

TO KEEP WIRING SAFE

Engineers specify

SHERARDUCT

RIGID STEEL CONDUIT

National Electric
PRODUCTS CORPORATION
Pittsburgh, Pa.

Reviews

(Continued from page 112)

the architect is "the only structural designer whose work constantly has to deal with human and social values," it is he who is recommended for planning.

Business Districts. *The Regional Planning Commission, County of Los Angeles, 1944.*

Addressed to the businessman and taxpayer, this survey is a study of the causes of the decline and obsolescence of a business district. Inadequate terminals for private and public carriers—garages, parking areas, bus, truck, and railroad terminals—are cited among major causes. Traffic surveys and graphs are included in the presentation. Building height legislation, pedestrian traffic studies, and retail sales development for the Los Angeles area are important factors in revitalizing the business district.

Planning Cleveland in 1943. *First Annual Report of the Cleveland City Planning Commission.*

This booklet, which can be perused in a few minutes, summarizes Cleveland's planning progress in 1943 and also explains to the public what city planning is all about. Its dual intent results in some writing too elementary for an official report and other passages too technical for the lay reader. But other publications of this planning body, notably *Things We Need,* have already dramatized the objectives of the city's 1944-49 Capital Improvement Program.

Blueprint for the Future. *Santa Clara County Planning Commission, Courthouse, San Jose, California, 1944.*

This is a fairly well-developed post-war plan for Santa Clara County, distinguished from the programs of other counties and cities in one important respect. A capital budget is to be established to stabilize the tax rate and *insure* funds for development. Many other such plans have cynically ignored the necessity for budgeting for future, as well as present, needs of the community, thus risking stoppage of development when the first funds are gone.

Housing Yearbook 1944. *National Association of Housing Officials, Publication No. N191., 176 pp., $3.00.*

This yearly summation of housing activities contains reports of the work of federal agencies concerned with housing, and an article evaluating housing activities, "The Housing Year: A Review." There is also a full directory of official advisory and unofficial housing agencies throughout the country.

(Continued on page 116)

Esterbrook

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PRECISION MADE
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...will be sent to draftsmen for comparison-tests. Simply give us the make and number of the pen you are now using.

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BRIXMENT *Assures More Economical Brickwork*

Aside from the cost of the brick itself, the most expensive item in masonry construction is the bricklayer's time.

Therefore the most economical mortar you can buy is the one that enables the bricklayer to lay the most brick per day. You cannot afford to give your bricklayer any mortar which causes unnecessary work, such as constant retempering, stooping to the board to replace mortar that failed to stick when he threw up the head-joint, etc. . . . To secure economical brickwork, the mortar must have excellent workability.

The plasticity of Brixment mortar is *ideal.* It approaches that of straight lime putty. It enables the bricklayer to do faster, neater brickwork, with the brick well bedded and the joints well filled.

This is the principal reason why Brixment reduces the cost of brickwork. In addition, less labor and supervision are required in mixing. No soaking or slaking. No mortar wasted. And it makes a neater job that costs less to clean down.

Mix a batch of 1-3 Brixment mortar (above) and a batch of 50-50 cement-lime mortar made with the same proportion of sand (below). Get any competent bricklayer to test them on the board—to spread them on the wall—to lay up a few brick with each of the two mortars. Then ask him which has the best workability!

LOUISVILLE CEMENT COMPANY, Incorporated
General Offices: Louisville 2, Kentucky
Cement Manufacturers Since 1830

Reviews

(Continued from page 114)

Trends which will decide housing's future are seen by the editors of the yearbook in legislation enacted or frustrated; in the reaction of the public to government control. It is interesting to note that disputes between local housing agencies and the National Housing Authority became fewer when ". . . it became evident that the war housing centers were carrying on purely temporary wartime activities and that there was no intention that they should become permanent local housing agencies." Appropriations for public housing funds were held down by Congress, while bills pertaining to housing war veterans, and those authorizing plans for post-war public works, were increased in number.

The yearbook also includes articles by John B. Blandford, Jr., Herbert Emmerich, Abner H. Ferguson, John H. Fahey, and others. The subjects are: "The National Housing Agency," "Public Housing in 1943," "The Federal Housing Administration's Second War Year," "The Federal Home Loan Bank Administration, 1943," "Army War Housing," "Navy Housing," "F.S.A.'s Rural Housing Activities in 1943," "Priorities in the War Housing Program: The Role of the W.P.B.," "Housing Aspects of the Operations of the Committee for Congested Production Areas," "Federal Rent Control in 1943."

Houses for Tomorrow. *Public Affairs Pamphlet No. 96. By Thomas R. Carskadon. Published by Public Affairs Committee, Inc., 30 Rockefeller Plaza, New York 20, N. Y. 32 pp. 10¢ per copy.*

In addition to surveying the role of public housing in the postwar years, this pamphlet covers: the amount of building that will be needed; the number of jobs that will be created; the changes that must be made, if our housing needs are to be met, in the house building industry, in trade union practices, and in selling and financing methods. The author concludes that these needs can only be met by abandoning the "great and heavy tradition of housing as a localized, feeble enterprise with a limited market." According to Mr. Carskadon, the need for public housing means continuation of the kind of help made available through the U. S. Housing Authority and carried on today by the Federal Public Housing Authority.

The pamphlet is based on a recent study made by the Twentieth Century Fund's Housing Committee, and is one of a popular, factual series.

Federal Agencies. *A Descriptive Tabulation of 428 Functional Units of the Federal Government. Publication No. 333. Citizens National Committee, Inc., 1409 L Street, N.W., Washington 5, D. C. 68 pp. 25¢ per copy.*

Designed to provide interested citizens with enough accurate information to launch them into consideration of what the federal government should do and how it should operate after V-day, this booklet provides the name, a description of the function, the method and year of creation, and the appropriation and estimated average personnel for each of the agencies listed as of June 30, 1944. In addition, these agencies are listed to show "parentage"—who works for or under whom; under what financial setup each operates; the exact source of the authority vested in each. A cross-index of official names and listing of key words in each name is included. Though designed for quite another purpose, the publication comes close to being a federal government guide book.

PAMPHLET REVIEWS

by Rita Davidson and William Smull

Railroad Grade Crossing Elimination. *City Planning Board, Niagara Falls, New York. Report to the City Council on Railroad Grade Crossing Elimination.*

The main tracks of two large railroad lines run the full length of the City of Niagara Falls and through its most densely built sections, causing the problem of grade crossing to be a major replanning consideration for this city.

Our Two-Front War in Domestic Aviation. *By Carleton Putnam, Pres., Chicago and Southern Air Lines, Inc. Obtainable at the Public Relations Dept., Chicago and Southern Airlines, Memphis, Tenn.*

Carleton Putnam believes in small private enterprises, the curbing of trusts by an "impartial" government, and free enterprise which does not impair future free enterprise by centralizing control in the hands of "sharks" who would prevent such freedom for small new companies. For downright democratic idealism, this talk before the Houston, Texas, Junior Chamber of Commerce can hardly be equalled. The two-front war refers to concentration of airlines control in the hands of large companies, and to control of airlines by ground carrier companies, such as the railroad and steamship corporations.

You—and Postwar Air Transportation. *American Airlines, Inc. 1943*

A large airline has taken this method of putting a questionnaire before the public, asking such questions as, "do you prefer male or female stewards," "do you want a special section of the plane for smoking," "would you rather pay extra for meals served aloft and have a choice of foods, or be limited to one menu without extra charge." More important questions are about places you may want to travel and desirability of air hotels at airports.

SUITS ANY TECHNIQUE

THE INTERNATIONAL STANDARD
SINCE 1880

One of the "Three Wise Men" in the picture is bound to please. They have many articles to suit one preference. How about one article which suits many preferences — Higgins American India Ink, of course, for whatever your method or technique, Higgins will do the job.

Higgins Ink is the first and only love of millions because it SUITS ANY TECHNIQUE.

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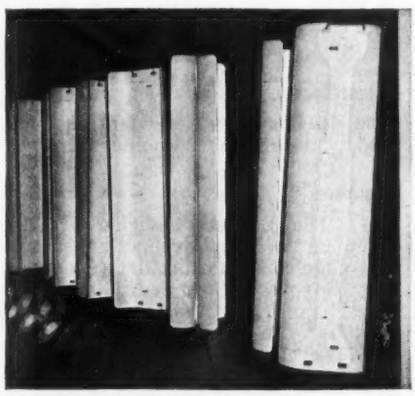
SYLVANIA NEWS
ARCHITECTURAL EDITION

DECEMBER *Published in the Interests of Better Sight and Sound* 1944

Plastic Finish for Reflectors Proves Its Superiority



Sylvania reflectors coated with plastic finish emerging from part of curing process.

After extensive study of reflector coatings, Sylvania has standardized on a plastic finish of exceptional hardness, flexibility, and light-reflecting efficiency. This finish —*not* an ordinary paint—is produced by the polymerization, under a unique heat treatment, of different molecules to form a new chemical compound.

This plastic finish has proved far superior to paint in its resistance to moisture and corrosive vapors. It is more flexible than vitreous enamels, and withstands distortion and bending more successfully.

DID YOU KNOW...

That Sylvania Blacklight Lamps are used for applications as diversified as the illumination of fluorescent instrument dials on airplanes, and the sorting of textile yarns?

★ ★ ★

That Sylvania is the only manufacturer in the fluorescent lighting field to produce "Complete Packages of Light?" Sylvania lamps, fixtures, and accessories are all carefully engineered to operate together harmoniously and efficiently.

Sylvania Lamp Life Ratings Newly Defined for Longer Time-on Cycles

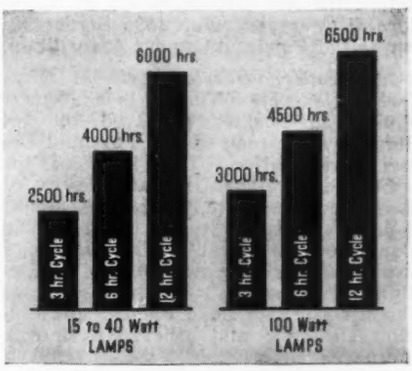
Permit Lower Operating Cost Estimates In Recommending Fluorescent Lighting

A more exact definition of the life ratings of Sylvania Fluorescent Lamps, based on a planned cycle of operation, indicates that architects, in recommending new installations of fluorescent lighting, can frequently point out to their clients the probability of considerably longer lamp life than would have been expected under previously published ratings. Hence preliminary estimates of over-all operating costs can be substantially reduced in many instances, thus placing Sylvania Fluorescent in a more favorable cost position.

BASIS OF RATINGS

Previous life ratings of Sylvania Fluorescent Lamps have been based on a 3-hour burning cycle. It is, of course, well known that in many commercial and industrial installations the time-on cycle is considerable longer than 3 hours. Since the frequency of starting is an important factor in fluorescent lamp life, longer time-on cycles will be reflected in increased life.

For this reason, Sylvania has extended its lamp ratings to include the 6-hour and 12-hour cycles frequently encountered in practice. These ratings are shown in the accompanying graph.



Life ratings of Sylvania Fluorescent Lamps for 3-, 6-, and 12-hour cycles, when burned under specified test conditions.

GERMICIDAL LAMP DATA PUBLISHED

Information on Standard Germicidal Lamps is now available in Sylvania's recently issued Special Electronic Products Bulletin. Architects will find these lamps of interest from the standpoint of their applications in hotels, restaurants, hospitals, and schools to prevent the contamination of drinking glasses, dishes and silverware; and in manufacturing plants to prevent contamination of products. Sylvania engineers aid in the design of installations.

Architects interested in these lamps may obtain copies of the Special Electronic Products Bulletin from Sylvania.

"It's that coal mining company again. Their office workers' efficiency went up so much since we recommended Sylvania Fluorescent, they want to know if we can suggest anything for the miners' CAPS!"

SYLVANIA ELECTRIC PRODUCTS INC.
Salem, Massachusetts

MAKERS OF FLUORESCENT LAMPS, FIXTURES, ACCESSORIES, INCANDESCENT LAMPS, RADIO TUBES, CATHODE RAY TUBES, ELECTRONIC DEVICES

Manufacturers' Literature

Acoustics

1-10. Features of acoustical plaster and instructions for application are contained in a 4-page illustrated pamphlet, *Kilnoise Acoustical Plaster*, from The Kelley Island Lime & Transport Co.

Air Conditioning

1-09. *The Servel All-Year Gas Air Conditioner*, Servel, Inc.

Bathroom Accessories

2-06. *Parker Bathroom Accessories, Cabinets, Mirrors*, 6-page folder, presents products of the Charles Parker Co. by means of photographs. Order numbers and sizes are given, as well as installation diagrams. Includes lighted mirror cabinets, recessed items, and other special accessories.

Bulkheads

2-04. *Bilco Copper Steel Bulkheads*, Bilco Co.

Communication Systems

3-15. *Holtzer-Cabot Communication Systems, A.I.A. File 28/11*, Holtzer-Cabot Electric Co.

Concrete

3-16. *Modern Developments in Reinforced Concrete (No. 10)*, Structural Bureau of Portland Cement Association.

3-19. *Modern Developments in Reinforced Concrete (No.11)*, is a 20-page illustrated booklet prepared by the Structural Bureau of the Portland Cement Association. This issue of the series deals with "Ultimate Design of Reinforced Concrete," with subheads as follows: "Stress-Strain Relations in Concrete and Steel"; "Derivation of Formulas for Flexural Design"; "Design of T-beams"; "Column Versus Beam Design"; "Load Factors and Column Design"; and others. Formulas, diagrams, tables.

3-18. Richmond Screw Anchor Co., Inc., publishes *Suggested Protection Against Termites, A.I.A. File No. 4-D-3, Bulletin of the Producers' Council, No. 37*, recommending prefabricated form ties instead of wire ties and wooden spreaders in form work.

Crematories

3-17. *Crematories, Bulletin No. 150*, Morse Boulger Destructor Co.

Doors

4-08. 12-page booklet on hangar and industrial doors, Byrne Doors, Inc.

4-11. Colored designs of monograms and emblems for elevator doors (single and double) are presented in two folders, both entitled *Dahlstrom Designs for Flush Doors*, from Dahlstrom Metallic Door Co. Color decks are available to architects and designers.

4-06. *Roddis Wood Doors Approved for One Hour Fireproof Openings*, Roddis Lumber & Veneer Co.

4-07. *Truscon Steel Hangar Doors—Vertical Lift Canopy Type*, Truscon Steel Co.

Drafting Room Equipment

4-10. *Precision Perspectives* is an illustrated folder (9 x 3⅞) from Chas. W. Dows and Son Co. Describes a line of perspective drawing instruments recently developed by this company; these instruments are claimed to make possible a degree of "photographic" accuracy heretofore not achieved by any but a skilled perspective artist.

4-09. *Catalog 2A (drafting room equipment)*, Engineering Sales Co.

Floors

6-08. *Floor Lath Specifications and Welded Wire Reinforcement, A.I.A. 4 E25-20-B-1*, Pittsburgh Steel Co.

Flooring

6-09. *Orco Safety Treads and Flooring, A.I.A. File No. 23-H*, Ohio Rubber Co.

6-10. *Resilient Floors, A.I.A. File No. 23j*, Congoleum-Nairn, Inc.

Glass

7-06. *Facts About Fiberglas for Design Engineers*, Owens-Corning Fiberglas Corporation.

Gypsum

7-07. *Certain-teed Gypsum Products*, a 20-page booklet, lists various uses of gypsum—for wallboard, plaster, lath, tile board, liner and partition board, sheathing, etc.—manufactured by Certain-teed Products Corporation. Basic specifications for lathing and plastering are included. Construction details, tables, photos.

Heating

8-21. *Bulletin G-34A (boilers)*, Babcock & Wilcox Co.

8-29. Residential and apartment house indirect water heating is described in a comprehensive 18-page consumer booklet from Bell & Gossett Co., *Triple Duty Heating System*. Equipment for this system: booster pump, indirect water heater, flow control valve. Photos, drawings.

8-24. *High-Altitude Heating for Buildings, Brochure 632*, C. A. Dunham Co.

8-25. *Iron Fireman Presents Coal-Flow Firing*, Iron Fireman Manufacturing Co.

8-26. Koven Waterfilm Boilers, Inc., present features of their product in an 8-page illustrated pamphlet. Residential and commercial boilers of welded steel, for automatic firing by oil, stoker, or gas; for steam and hot water. Diagrams, details, dimensions, capacities are given.

8-27. Residential and industrial furnaces—coal, gas, and oil—are described and illustrated in a group of bound bulletins entitled *Lennox Heating and Air Conditioning*, from Lennox Furnace Co., Inc. One bulletin is devoted to the "Stowaway" gas furnace, designed to heat basementless homes; furnace may be installed horizontally on attic ceiling rafters. Air conditioning units are also presented in detail.

8-23. *Modine Horizontal Delivery Unit Heaters, Bulletin 144-A*, Modine Manufacturing Co.

8-22. *Personalized Heating Control for Apartments, A.I.A. File No. 30-F-2*, Minneapolis-Honeywell Regulator Co.

8-28. Information on boilers—coal, gas, or oil—jacketed or unjacketed, hand or stoker fired, round or square sectional, and on radiators—is given in a series of pamphlets in a paper bound booklet, *Capitol Boilers*, prepared by United States Radiator Corporation. Standard requirements, I.B.R. ratings, and various data are furnished.

8-31. 3 data sheets showing roughed-in drawings, dimensions in inches, and input and output ratings for three types of suspended unit heaters, are published by Reznor Manufacturing Co. Heaters are gas-fired—propeller fan, blower, and duct types.

Incinerators

9-08. *Incinerators* (residential, industrial), Joseph Goder Incinerators.

Insulation

9-11. The Barrett Division of Allied Chemical & Dye Corporation presents a 24-page consumer booklet (9 x 6), *The Most Important Step in Home Improvement in a Generation (Form 696)*. It discusses the greater comfort, health, and lowered heating cost brought about by insulation and presents various uses of Barrett rock wool. Photographs and drawings.

9-10. *Industrial Insulation, No. 561-25-40*, from Minnesota and Ontario Paper Co., is a 4-page folder describing uses and giving physical properties of "Insulite" wood fiber structural insulation board, fabricated to meet specific requirements. It mentions other insulation products. Illustrations, conductivity chart.

9-09. *Insulation and Your Home (consumer)*, National Mineral Wool Association.

9-07. *Zonolite Cold Storage Insulation (A.I.A. File No. 37-b-3)* is a 56-page booklet on insulation for locker plants and cold storage units, from Universal Zonolite Insulation Company. "Zonolite" is described as a substance; its properties and use in insulation with concrete, steel vapor proof building papers, masonry, etc., are discussed. Construction details, specifications, storage properties, charts, etc., are given.

9-04. *Nu-Wood Roof Insulation*, Wood Conversion Co.

9-05. *Nu-Wood Insulating Lath Application Information*, Wood Conversion Co.

9-06. *Nu-Wood Insulating Sheathing Application Information*, Wood Conversion Co.

Joists

10-01. *Bethlehem Open-Web Steel Joists, A.I.A. File No. 13 G* (for light-occupancy structures), Bethlehem Steel Co.

Lighting

12-08. *Zeon Cold Cathode Fluorescent Lighting*, Federal Electric Co., Inc.

Metal

13-07. *Robertson Products for Airport Buildings, G-1-844,* 16-page booklet, describes and illustrates use of H. H. Robertson Co.'s new metal roofing and siding for airport buildings, from floors and doors to panels, Q-decks, skylights, and ventilators. These products are said to be adaptable to all types of construction systems. Photos, drawings, details.

Miscellaneous

13-06. *Ampro Precision Cine Equipment,* Ampro Corporation.

13-05. *How to Plan a Home Workshop (consumer booklet),* Delta Manufacturing Co.

Paint

16-18. Protection against corrosion and contamination in structural details by means of a plastic coating is described in a 12-page illustrated brochure, *Amercoat,* from American Pipe and Construction Co. The company recommends its use only insofar as laboratory tests and practical experience have adequately produced proven values.

16-22. *Some Painting Problems and the Answers,* 4 pages, is a reprint of an article by F. L. Browne, Senior Chemist of Forest Products Laboratory, Madison, Wis., and is published by Lead Industries Association. It discusses the cure for poor paint, for "moisture" failures, for mistakes in application and maintenance, the need for classification of paints.

16-13. *Paint Progress, A.I.A. File No. 25,* New Jersey Zinc Co.

16-15. *Color Power for Industry, A.I.A. File No. 25,* Arco Co.

Piping

16-16. *Water Pipe Sizes, A.I.A. File No. 29-B-4,* Bridgeport Brass Co.

Plastics

16-14. *Plaskon, Plastic Materials for Modern Industrial Production,* Libbey-Owens-Ford Glass Co.

16-17. A consumer booklet, *How to Put Dow Plastics to Work* (16 pages), from Dow Chemical Company, describes, illustrates, and discusses in an introductory fashion the uses of Dow plastics—three in particular, "Styron," "Ethocel," and "Saran." Among uses listed: housings, insulation, lighting fixtures, laminates, rods, tubes, bars, special extruded shapes for decorative uses and kitchen trim, window frames and blinds, instruments carrying light around bends, insert screening, textile, paint, and adhesive component.

Plumbing

16-21. *Drains, Plumbing Equipment Specialties, Catalog W-44, A.I.A. 29c,* from Wade Manufacturing Co., lists specifications, recommended uses, standard and special construction, and features of such equipment—from heavy duty floor drains and manholes to U. S. Government specification specialties. 64 pages, data, drawings.

Plumbing Fixtures

16-22. Photographs and drawings of various types of bathtubs, lavatories, sinks, cabinets, and accessories are presented in a 16-page booklet (5½ x 8½), *Briggs Beautyware, Form 40-12-1,* from Briggs Manufacturing Co. Color chart, order numbers, and fixture combinations are given.

16-03. *Douglas Folders* (plumbing fixtures), The John Douglas Co.

Plywood

16-20. *Local Built Display Fixtures* is a 20-page consumer booklet with detail illustrations, from Douglas Fir Plywood Association. It presents suggestions for 144 display fixtures made of fir plywood for use in local display shops, cabinet shops, and stores. Listed are sizes, grades, and thicknesses of plywood, with official trademarks. Although fir plywood is not yet available for civilian use, the booklet is issued for use in postwar plans.

Roofing

18-02. *Better Roofs of Steel, Booklet 132,* 40 pages, is presented by Bethlehem Steel Co. Data are given on: five roofing types; estimation of roofing needs; instructions on laying roofing; plain and rock-faced brick siding; zinc-coated wire fence. Detail drawings, diagrams, photographs.

18-01. *Specifications No. 44 (roofing),* Koppers Co.

Screening

19-13. *Lumite, the New Plastic Screen Cloth, A.I.A. 35P,* Chicopee Manufacturing Co.

Skylights

19-12. *Original Solid Corrugated Wire Glass, Skylights, Sawtooth and Sidewall Construction, No. 8,* Pennsylvania Wire Glass Co.

19-15. Skylights or glass roofs of "Magnalite" diffusing tiles or common glass are described in *Precision Daylighting Type W-F Skylights, Catalog W-44-F,* 4-page pamphlet from J. Merrill Richards. Photos, construction detail drawings, drawings of suggested arrangements.

Steel

19-16. *Bethlehem Structural Shapes, Catalog S-53,* 102 pages, is an indexed booklet (6 x 9) from Bethlehem Steel Co., containing information and tables for architects, engineers, and designers of buildings and other steel structures. Included are calculation method, expression of weights, rolling and cutting tolerances, dimensions, detail drawings.

Temperature Control

20-10. *With the Johnson Electronic Duo-Stat, Catalog Bulletin No. 396, Edition 1,* is a 12-page consumer booklet describing Johnson Service Co. temperature control and how it contributes to the economy and comfort of heating all types of buildings. Diagrams, layouts, and description of auxiliary equipment are included.

Tile

20-09. Details and drawings of 6" and 12" glazed structural units of varying thicknesses are included in *Kraftile Structural Wall Units,* a 30-page booklet from Kraftile Co. "K" series deals with units for furring and partitions; "B" series with units of 8" thickness for structural walls of reinforced tile masonry; "H" series with precision-sized wall units.

Toilet Compartments

20-08. *Weisteel Metal Compartments 17/13,* Henry Weis Manufacturing Co., Inc.

Trims

20-07. *Condensed Catalog No. 1 (aluminum trim),* R. D. Werner Co.

Tubing

20-06. *Tube Data (steel),* Seamless Steel Tube Institute.

Walls

23-18. *Steel Mobilwalls,* Snead & Co.

23-21. *Tylac Wall Products, A.I.A. File No. 23-L,* a 4-page illustrated pamphlet from Tylac Co., describes tile-effect panels used as wall covering, metal (stainless steel and extruded white alloy) and "Presdwood" moldings, and accessories.

Welding

23-20. *Fleet-Welding,* Lincoln Electric Co.

Windows

23-19. *How and Where to Use More Windows,* Curtis Companies, Inc.

Pencil Points, 330 West 42nd St., New York 18, N. Y.
I should like a copy of each piece of Manufacturers' Literature listed.
We request students to send their inquiries directly to the manufacturers.

NO.	NO.	NO.	NO.
NO.	NO.	NO.	NO.
NO.	NO.	NO.	NO.
NO.	NO.	NO.	NO.

NAME _____ POSITION _____

FIRM _____

MAILING ADDRESS _____ ☐ HOME ☐ BUSINESS

CITY _____ STATE _____

12/44

PLEASE PRINT

Ideas for the use of *glass*

1 Floods of daylight, an unobstructed view of outdoor beauties, and an extremely attractive exterior appearance . . . these are the advantages of using large areas of Pittsburgh Polished Plate Glass in residential design. This picture shows how one architect has applied the principle in a lovely Arizona home. Architect: Lewis Hall.

2 It's always interesting to see how an architect uses glass when he designs a home for *himself*. Here, a picture window of Pittsburgh Polished Plate Glass, and generous supplementary areas of Pennvernon Window Glass, greatly enhance the brightness, charm and "livability" of an attractive room. Architect: Joseph Douglas Weiss, 101 Park Avenue, New York.

3 Unlimited possibilities for original and appealing bathroom design are open to the architect who employs Carrara Structural Glass. This polished, reflective glass comes in ten lovely shades, can be surface-etched, sand-blasted, laminated, fluted and bent. Architect: Paul Lewin.

4 The center of attraction in any living room can be a beautifully-mirrored fireplace like this. Pittsburgh Structural Mirrors, available in four colors of plate glass, with three colors of backing, are among the most versatile materials for striking design an architect can use. Architect: Maier & Walsh.

Dreams Into Realities

DESIGNER to a new-world-trend in modernization and metalization . . . the architect is acutely conscious of opportunity and responsibility to do something about making the postwar world a better place in which to live. With greater work than ever before challenging his capacity . . . attuned to wider markets for his service . . . the architect is keenly sensitive to new standards.

Good materials . . . skilled craftsmen . . . modern techniques . . . cannot alone provide America with the buildings adequate to house Business, Industry and Institutions in the design for better living.

The architect . . . artistic by nature . . . practical by profession . . . must be the focal point in the better construction job that lies ahead.

With a background of rich experience in the development of metal furniture . . . we shall again build Desks, Tables, Filing Cabinets and other equipment items for offices . . . equipment for hotels, hospitals, libraries and institutions . . . steamships, railroads and public buildings . . . that will be in keeping with architectural development in the translation of *dreams into realities.*

THE GENERAL FIREPROOFING CO.
YOUNGSTOWN 1, OHIO
U. S. A.

THE GENERAL FIREPROOFING COMPANY • *Youngstown 1, Ohio*

TAL DESKS • ALUMINUM CHAIRS • METAL FILING CABINETS • STEEL SHELVING • FILING SUPPLIES • SAFES • STORAGE CABINETS

INTERNATIONAL AIRPORT. From a plane circling to land, Hugh Ferriss surveys an airport of the future. Arranged on a radial system, 22 mile-long-runways are seen, those in use being flood-lighted. The terminal building, on center, is reached by a 10-lane highway underpassing the apron. In right foreground, a glimpse of the buildings – official, commercial, mercantile, also hotels, theatres, etc. – which would naturally develop around an international airport.

Trinity White will play an important part in such construction. This "whitest white" portland cement gives highest light reflection and visibility to runways, traffic markers, hangar floors, etc.; its greater beauty gives character and prestige to buildings, large or small.

TRINITY PORTLAND CEMENT CO. *(COWHAM SYSTEM)*, DALLAS & CHICAGO

. . . planned to serve

FOR TOMORROW'S HOME

With the belief that new ideas can be helpful and stimulating, GENERAL ELECTRIC brings you another in its series of postwar lighting perspectives by leading architects and designers. Here G-E brings you a different view of home lighting by designer G. McStay Jackson, Chicago.

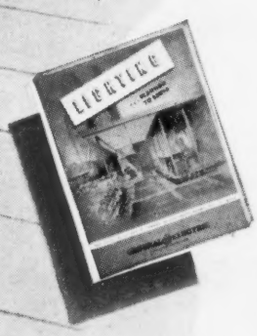
"Let's make lighting effects *practical,*" says Mr. Jackson.

"For lighting the postwar home, why not combine pleasing beauty and practical help for eyes?

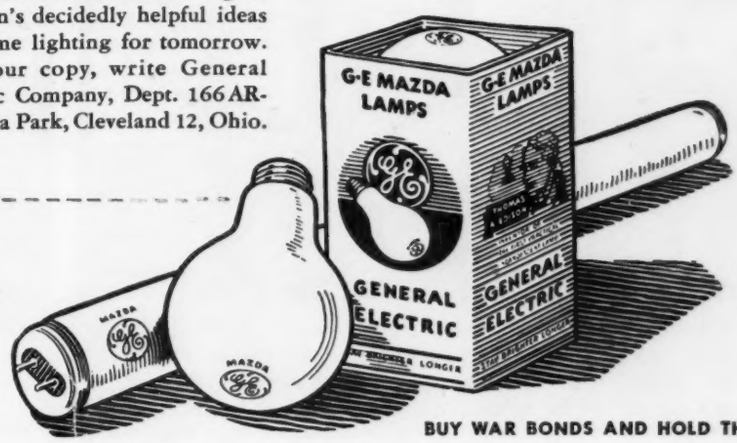
"In sketching our ideas on lighting for the various rooms of a moderate-priced postwar home, that is exactly what we have tried to do. We have provided the kind of lighting which we felt was *appropriate to serve the needs of the home-owner.*

"For instance, in the living room, we suggest several applications of fluorescent lighting, using built-in prefabricated fixtures for overall light, with concealed spotlights in the ceiling over the couch for reading light. A two-armed portable lamp using the new circular fluorescent lamps could provide light for close work in easy chairs.

"A similar lighting approach to other rooms will truly create a home for better, happier living."



A colorful new booklet, "Lighting planned to serve" reveals designer Jackson's decidedly helpful ideas on home lighting for tomorrow. For your copy, write General Electric Company, Dept. 166 AR-12, Nela Park, Cleveland 12, Ohio.



THE CONSTANT AIM OF G-E LAMP RESEARCH IS TO MAKE G-E LAMPS *Stay Brighter Longer*

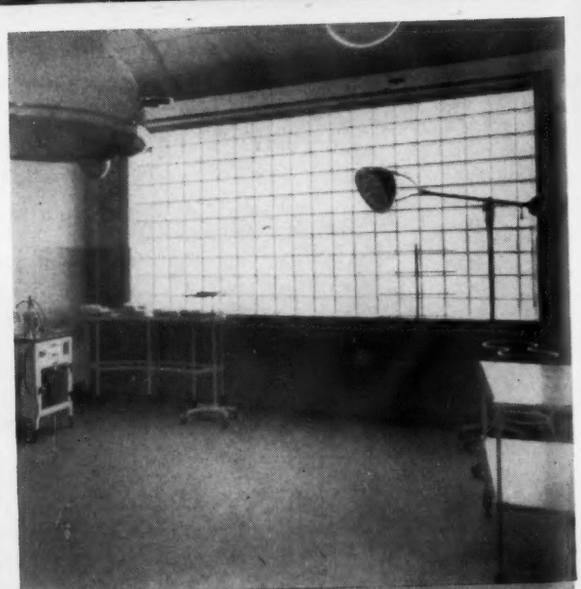
Hear the General Electric radio programs: "The G-E All-Girl Orchestra", Sunday 10 p. m. EWT, NBC; "The World Today" news, every weekday 8:45 p.m. EWT, CBS.

BUY WAR BONDS AND HOLD THEM

Plan for MORE LIGHT... LESS HEATING

In this distinctive modern home PC Glass Block panels enhance exterior appearance, flood cheerful interiors with plenty of clear daylight and ease the load on heating and air-conditioning equipment. The clean design and smooth surface of PC Glass Blocks in walls, partitions and screens make them quick and easy to clean. Their insulating qualities eliminate condensation. Privacy is assured. Drafts and infiltration of dust are prevented. Architect — Philip B. Maher.

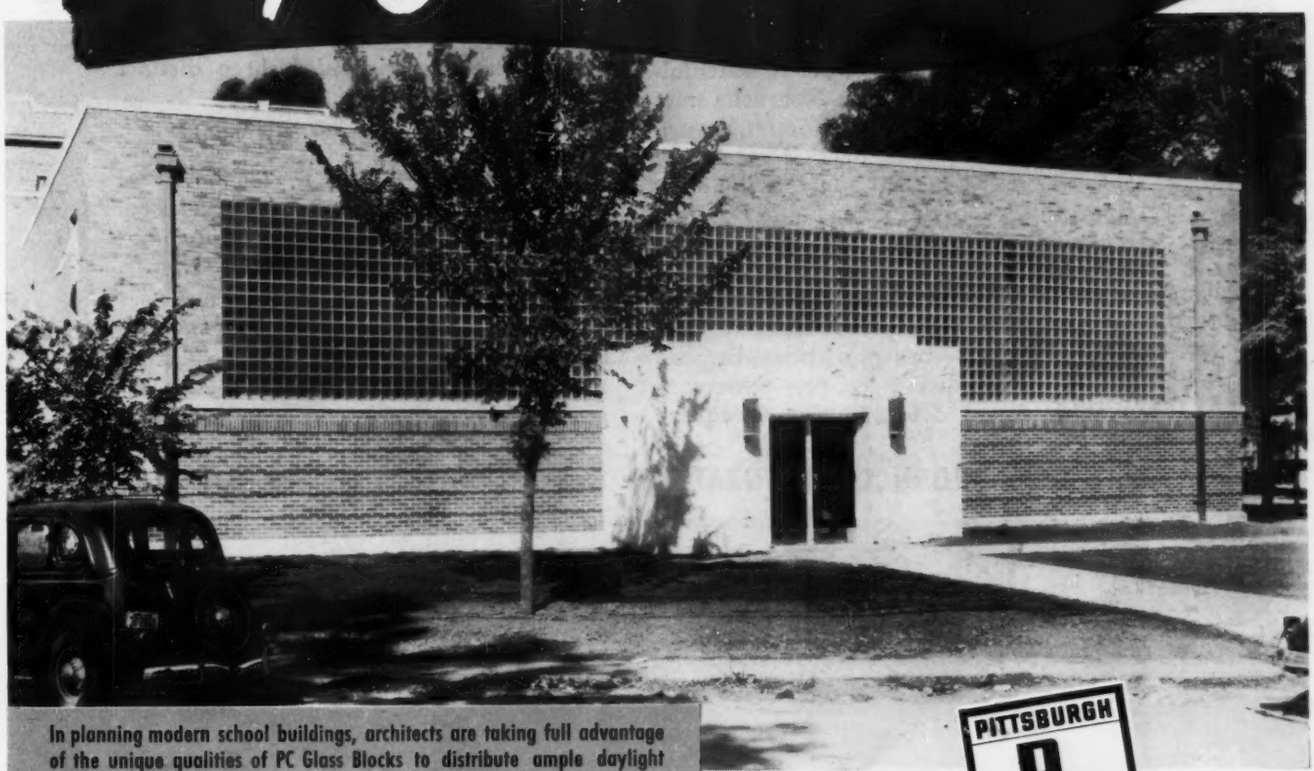
When large areas of sash were replaced with panels of PC Glass Blocks in this food plant, workrooms were more generously supplied with diffused daylight, sash repairs and replacement were eliminated, the panels were cleaned in a few minutes by a man with a long-handled brush.



In modern hospitals PC Glass Blocks provide proper lighting, insure healthful warmth, are so easily cleaned that sanitation is maintained at low cost. Another advantage is reduced distraction from outside sights and sounds.

AND CLEANING COSTS...

WITH *PC Glass Blocks*



In planning modern school buildings, architects are taking full advantage of the unique qualities of PC Glass Blocks to distribute ample daylight to all parts of classrooms, as shown above. These blocks also cut heat losses, exclude dust, deaden distracting noises. Architect—Oren Thomas.

YOU can confidently recommend PC Glass Blocks to your most exacting clients, for homes of all types, sizes and costs. They are also being used successfully in many types of factory buildings. They can save time, trouble and money for your industrial clients.

PC Glass Blocks are produced by the Pittsburgh Corning Corporation whose up-to-the-minute facilities and equipment, experienced personnel and specialized knowledge accumulated through years of research, combine to maintain leadership in the field of glass processing.

When you want authoritative information about PC Glass Blocks—construction data, sizes, patterns, figures on insulating and light transmitting characteristics—for homes and for industrial, commercial and institutional buildings—we shall be glad to supply them upon request.

PITTSBURGH CORNING CORPORATION
632 DUQUESNE WAY · PITTSBURGH 22, PENNA.

PITTSBURGH PC CORNING

GLASS BLOCKS

Distributed by

PITTSBURGH PLATE GLASS COMPANY

and by W. P. Fuller & Co. on the Pacific Coast

Pittsburgh Corning Corporation—Room 700
632 Duquesne Way, Pittsburgh 22, Pa.

Gentlemen:

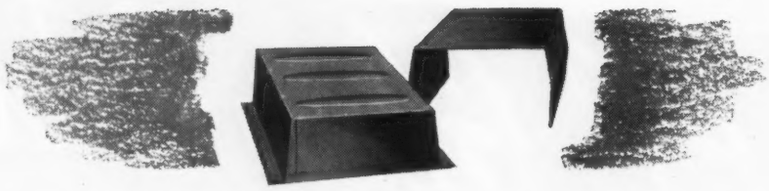
Please send me the free, illustrated books that tell how PC Glass Blocks have been used successfully in many types of buildings.

Name_____

Address_____

City_____ State_____

HOW THIS SMALL STEELFORM EFFECTED



THE very building itself is testimony to the inscription over its stately portals —"The salvation of the state is watchfulness in the citizen." For the Nebraska state fathers, ever watchful of economies, *created this monumental masterpiece at substantial savings to the tax payer.* Some of the most important economies were made possible by the Meyer Steelform, produced exclusively by Ceco.

Ceco introduced this dynamic engineering concept in reinforced concrete construction just 31 years ago. Today, because of its inherent advantages over other concrete joist forms, over 200,000,000 square feet of concrete joist floors have been built with Meyer Steelforms. This because the Meyer Steelform provides three distinct construction economies:

1. Direct savings in concrete and steel;

2. Direct savings in supporting formwork;

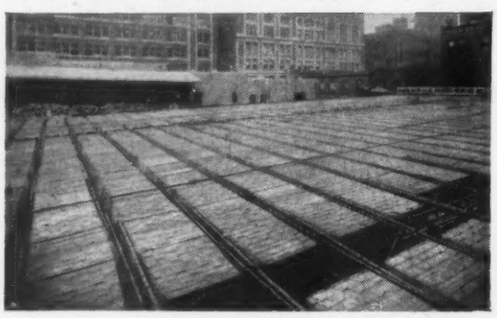
3. Direct savings in number of forms used, for the Meyer *removable* form can be used over and over on a nominal rental basis.

Yes, for builders using reinforced concrete construction, Meyer Steelforms and Ceco construction products do a better, more economical job, through better engineering.

CECO STEEL PRODUCTS CORPORATION • *General Offices* • *Omaha, Nebraska*

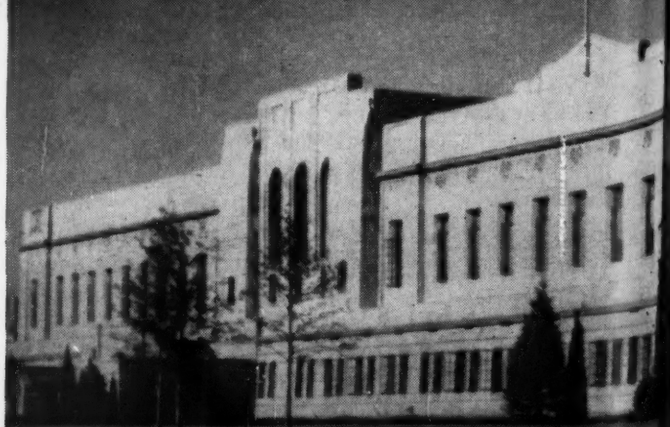
Manufacturing Division • 5701 W 26th St., Chicago, Ill.

Eliminates extra framework . . With the Meyer Steelform you use a simple open wood centering, that can be removed and re-used with the Meyer Steelforms from one floor to the next.



Gain time and efficiency . . . The placing of re-inforcing bars and concrete goes faster when you use Meyer Steelforms, and their solid rigidity eliminates leakages, insures accurate execution of structural design.

Complete list of Ceco engineered products for reinforced concrete construction includes: Meyer flange type steelforms, Meyer adjustable type steelforms, reinforcing bars, column spirals, welded fabric, bar chairs, spacers and accessories, column clamps and adjustable steel shores.



ENGINEERING MAKES THE BIG DIFFERENCE IN CECO

Let's look at the record of...

777 aluminum windows and sash, aluminum-sheet roofing, ornamental work inside and out, aluminum gutters, conductor heads and downspouts, snow guards, lightning rods and cables, radiator grilles.

● Eleven years exposure to the elements have only caused the aluminum on the exterior of this magnificent structure to weather to the desired lead-gray patina, giving that feeling of ageless permanence belonging to the church. Aluminum windows and aluminum roofs are weathertight and secure.

Decorative aluminum on the interior, radiator grilles, railings, all show signs of conscientious care. This they've repaid by the ease with which the aluminum is maintained.

And so the reports on architectural aluminum continue to come in as Alcoa carries on their nationwide survey. Architects are delighted with appearance and performance. Owners say maintenance is easy. Financially-minded men are pleased with low upkeep costs.

Include Alcoa Aluminum in your designs and gain these same advantages. We'll gladly send you any information on aluminum you may need. ALUMINUM COMPANY OF AMERICA, 2198 Gulf Building, Pittsburgh 19, Pennsylvania.

East Liberty Presbyterian Church, Pittsburgh, Pennsylvania. Architects: Cram & Ferguson, Boston, Mass.

The Window of the Future is Aluminum

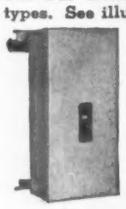
ALCOA ALUMINUM

CHANGING the PLANT LAYOUT?

IF (FA) BUSDUCT distribution for light and power is already installed, it will be a simple matter to adjust it to new requirements. It is practically 100% recoverable.

(FA) PLUGIN DEVICES

The (FA) Plugin Devices can be arranged to go on either or both sides of the Plugin (FA) Busduct, and each Plugin device is supported by independent fastenings. All (FA) Plugin Devices are equipped with proper capacity of rugged compression type bus bar connectors. They are made in three types. See illustrations below:



At left: (FA) Circuit Breaker Type.

Below: (FA) Klampswitchfuz (hinged type pull-out) Safety Type Fuse Disconnect.

Above: (FA) Shutlbrak (operating Switch) with Kamklamp Fuse Holders.

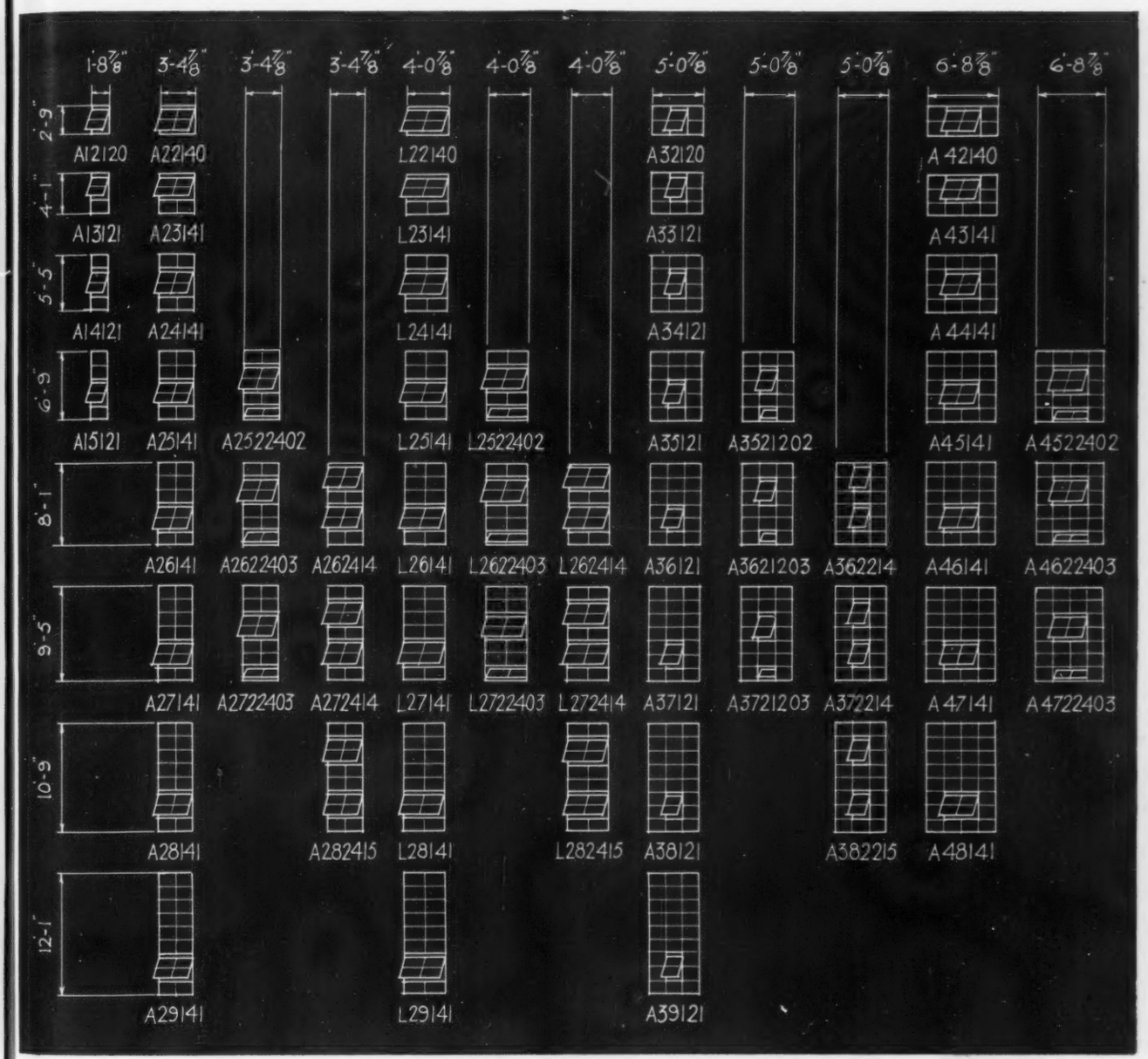
Or, consider the conveniences and economies of this modern system in *new* planning . . . Feeder (FA) Busduct is ideal for large capacity connections between generators (or transformer station) and main switchboard, and between the latter and the feeder distribution system to the various parts of the building . . . Plugin (FA) Busduct affords great flexibility for machine layout. The plugin outlets spaced on 12-inch centers, make it possible to locate machines at any desired position, and to plug in quickly at the most convenient outlet — with minimum loss of production hours . . . Both Feeder and Plugin types are made in standard 10-foot sections. Suitable elbows, tees, cross connections, intermediate feed-in and feed-out boxes, end closures with surge discharge protectors, and reducing capacity sections, make it possible to fit (FA) Busduct to any desired arrangement. It is adaptable to any required position or location . . . Extensions may be made readily to existing systems, without disturbing them, and at minimum labor cost . . . Installation of (FA) Busduct is economical for small plants, as well as large.

Designed for 2, 3 and 4-wire feeder systems; 250 volt DC, 575 volt AC, maximum. Capacities in accordance with Limitation Order L-273.

Write for Bulletin 65

Also for name and address of nearest (FA) Sales-Engineer. Whether revamping the distribution system, or installing a new one, his long experience will be helpful to you . . . Frank Adam Electric Co., Box 357, St. Louis 3, Mo.

Frank Adam
ELECTRIC COMPANY
ST. LOUIS



These are the Types and Sizes which will be available in *Truscon Commercial Projected Steel Windows*

• Here's your blueprint of the Truscon Commercial Projected Steel Window types and sizes that will be ready for your use just as quickly as our wartime obligations are fulfilled.

These types and sizes are those approved by the Metal Window Institute and are based upon the Project of dimensional coordination of building products promoted by the American Standards Association Project A62, under the sponsorship of the American Institute of Architects and the Producers' Council.

Write for your copy of Truscon's Steel Window Section which will appear in the 1945 "Sweet's Architectural File." It will contain types and sizes and installation details on all Truscon window designs.

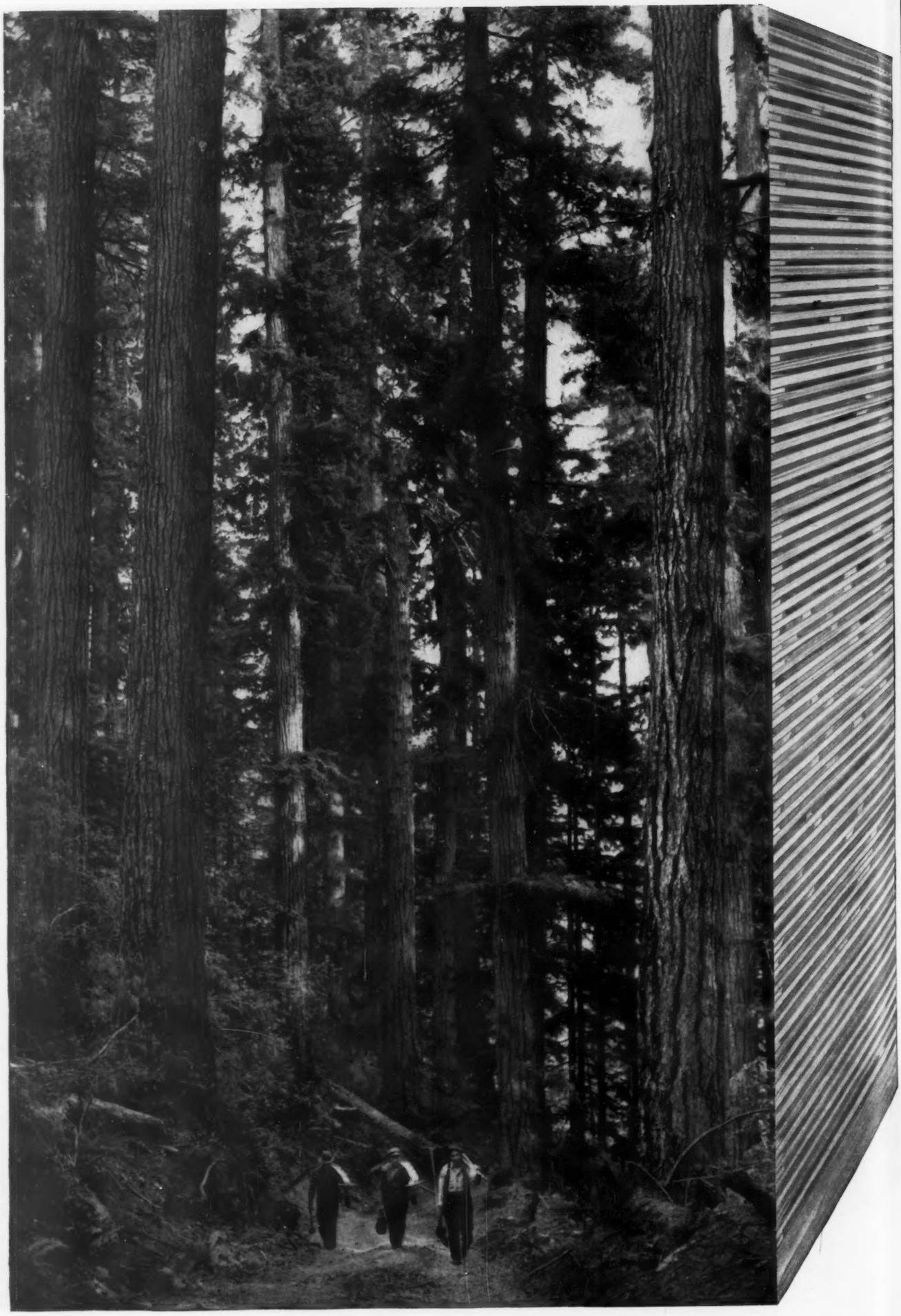
TRUSCON
Steel Company
YOUNGSTOWN 1, OHIO
Subsidiary of Republic Steel Corporation

THE PRODUCERS' COUNCIL INCORPORATED

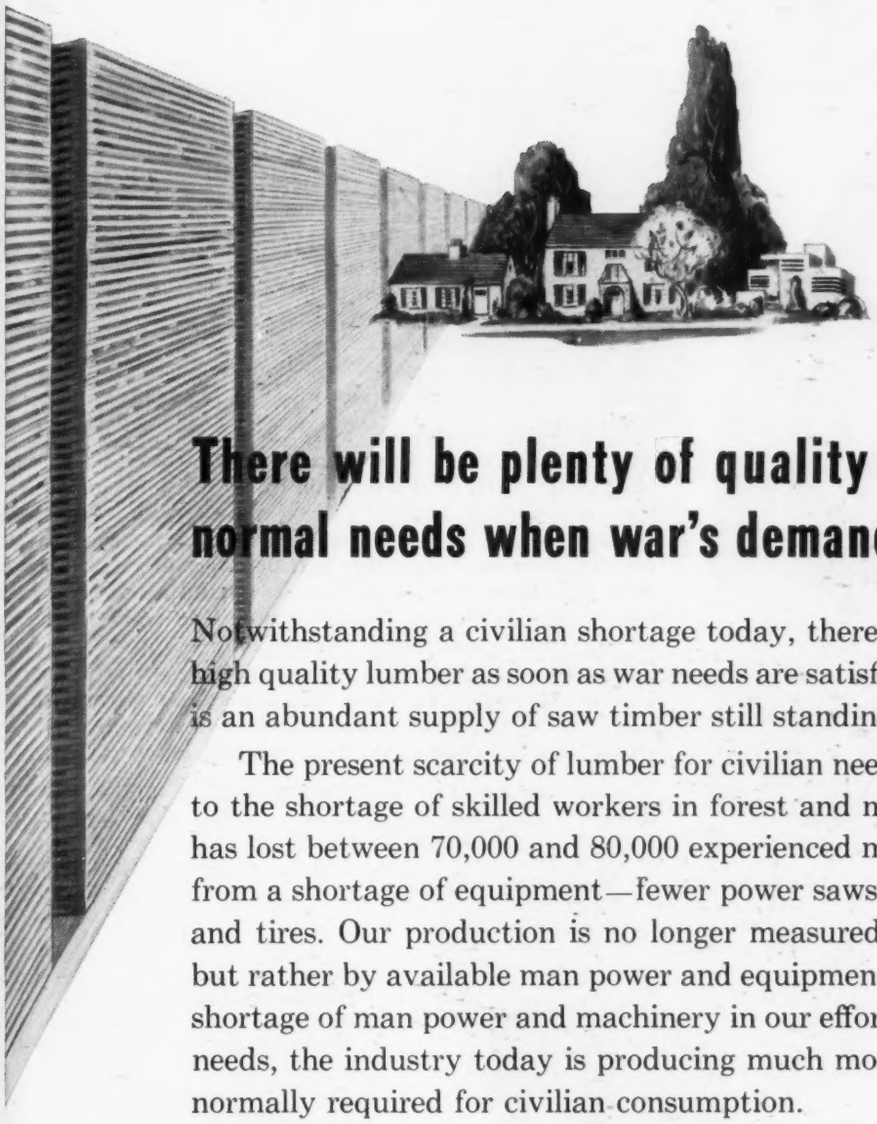
ARMY-E-NAVY

LIGHT AND AIR ARE FREE • USE THEM!

AIA FILE NO. 16-E



here's one story that should be circulated...



There will be plenty of quality lumber for normal needs when war's demands are over!

Notwithstanding a civilian shortage today, there will be plenty of high quality lumber as soon as war needs are satisfied, because there is an abundant supply of saw timber still standing in U. S. forests.

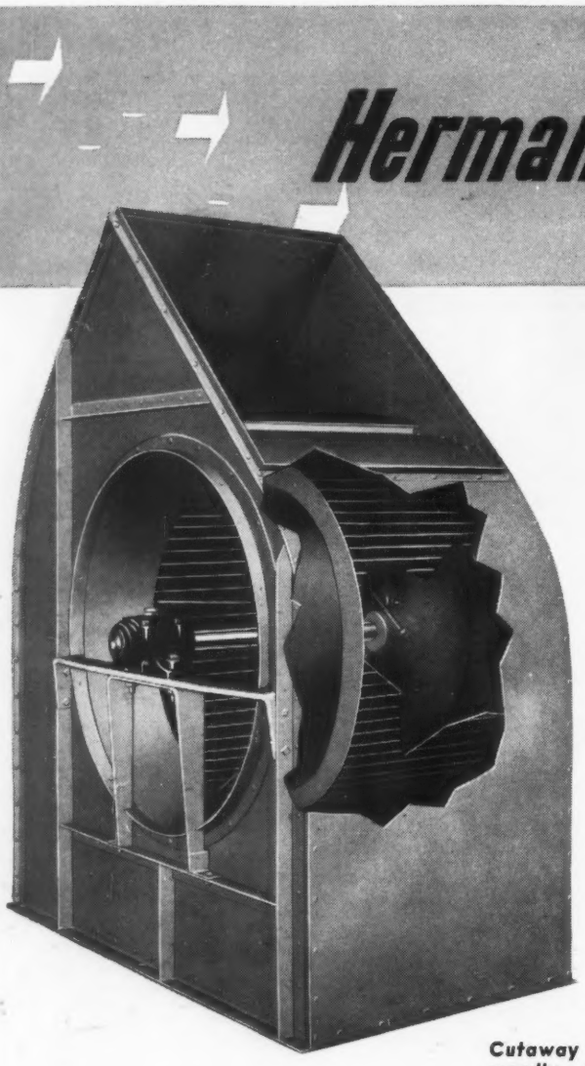
The present scarcity of lumber for civilian needs is due, in part, to the shortage of skilled workers in forest and mill. The industry has lost between 70,000 and 80,000 experienced men. It suffers too from a shortage of equipment—fewer power saws, tractors, trucks, and tires. Our production is no longer measured in mill capacity but rather by available man power and equipment. Yet despite the shortage of man power and machinery in our effort to meet the war needs, the industry today is producing much more lumber than is normally required for civilian consumption.

The channeling of this production to civilian markets is a simple matter. For there is no reconversion problem in the lumber industry. War needs and civilian needs are similar. They both use the same sizes, grades and items. With reconversion we'll simply continue to produce and ship traditional Weyerhaeuser quality for civilian consumption.

WEYERHAEUSER SALES COMPANY
SAINT PAUL 1, MINNESOTA

WEYERHAEUSER 4-SQUARE LUMBER AND SERVICES

Herman Nelson Centrifuga



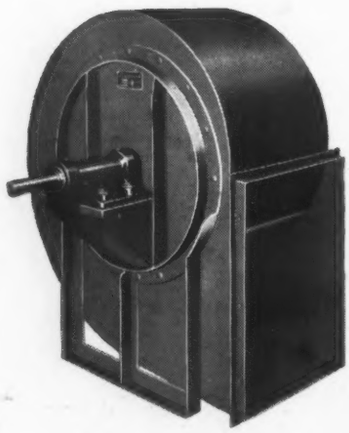
. . . for heating, cooling, ventilating, a conditioning and process application

Today practically every heating, cooling, ventilating, air co ditioning or processing problem calls for the movement of a Often this problem of air movement can best be solved by t use of a blower. Not just any blower, but a blower design and constructed for the performance required by a particul application.

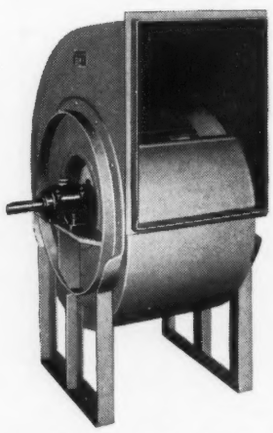
The Herman Nelson Corporation, manufacturer of blowers f over thirty years, is in a position to furnish blowers for most these applications. Herman Nelson blowers with wheel diamete from 6″ to 73″ deliver from 250 to 308,200 cu. ft. of air p minute. Arranged for either belt or direct drive, they are avai able with forwardly or backwardly curved blades. Both sing inlet single width and double inlet double width blowers ma be operated against static pressures up to 5″ W.G. and wi handle air up to 700° F. They are available with top horizonta bottom horizontal, up blast, down blast, or angular discharg and either clockwise or counter-clockwise rotation. If we haven the blower for your application, we will tell you.

The next time you have a heating, cooling, ventilating, air co ditioning or processing problem, contact the Herman Nelso distributor in your locality or write to u and we will have a Herman Nelson Produ Application Engineer contact you.

Cutaway view of a forwardly curved blade SI SW, Arrangement 3, angular discharge, Herman Nelson Blower.

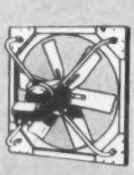


Forwardly curved blade, SI SW, Arrangement 2, bottom horizontal discharge, Herman Nelson Blower.



Forwardly curved blade, SI SW, Arrangement 3, top horizontal discharge, Herman Nelson Blower.

Backwardly curved blade, SI SW, Arrangement 1, bottom horizontal discharge, Herman Nelson Blower.

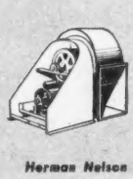


Herman Nelson Direct Drive Propeller Fans

Herman Nelson Belt Drive Propeller Fans

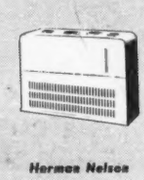
Herman Nelson Horizontal Shaft Propeller-Fan Type Heaters

Herman Nelson Vertical Shaft Propeller-Fan Type Heaters

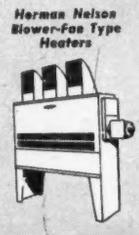


Herman Nelson Belt Drive Unit Blowers

Herman Nelson Direct Drive Blowers



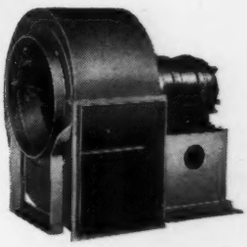
Herman Nelson De Luxe Heaters



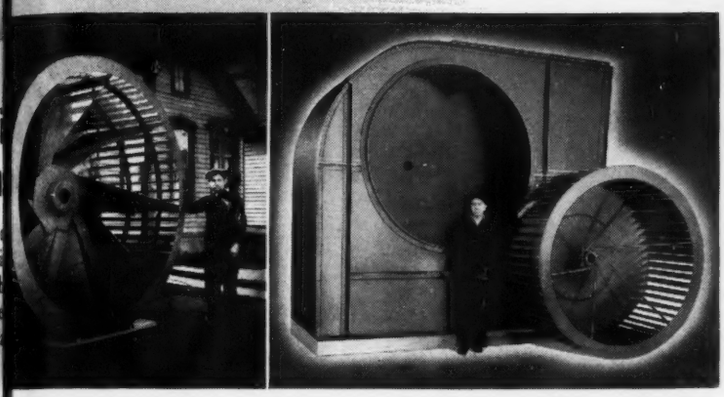
Herman Nelson Blower-Fan Type Heaters

Blower Fans

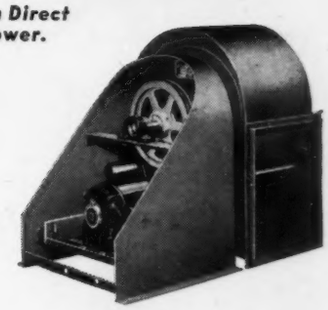
Herman Nelson Direct Drive Unit Blower.



Herman Nelson Direct Drive Unit Blower.

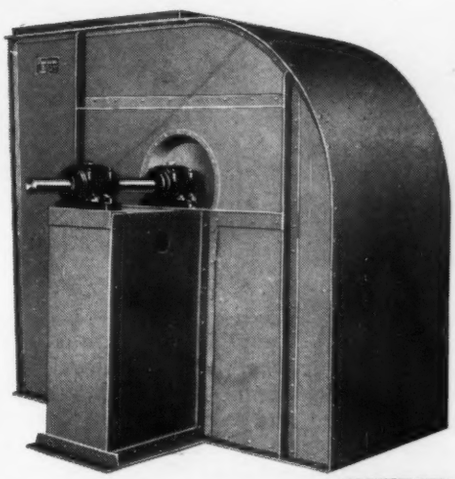


OLD TIME, special SI SW Herman Nelson Blower built in 1917 for American Smelting and Refining Company. Capacity 272,000 c.f.m. at 200 RPM; belt-drive; overhung wheel; the water-cooled bearings weighed 3,200 lbs.; wheel diameter 120", width 64"; height of housing 240"; outlet, 122" x 78".

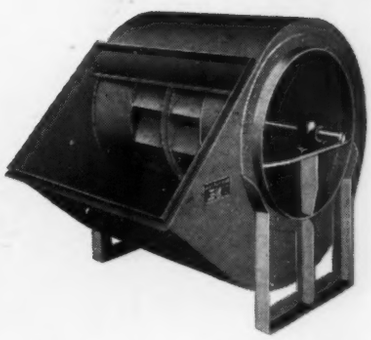


Herman Nelson Belt Drive Unit Blower.

MODERN, standard SI SW Herman Nelson Blower, Type H, Unit 12, built for Central High School of Needle Trades, N. Y. City. Capacity 54,400 c.f.m. at 142 RPM; belt-drive; centerhung wheel (Arr. 3); ball bearings; wheel diameter 75", width 37½"; height of housing 123"; outlet 80¼" x 56¼".

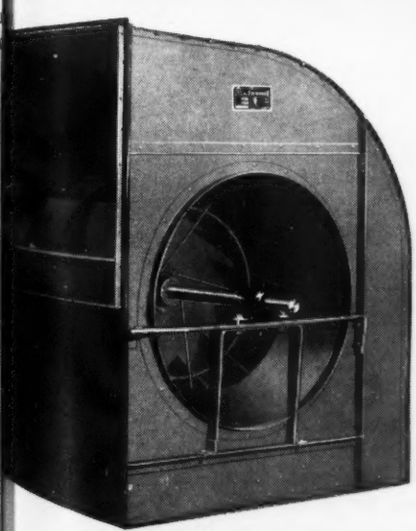


Forwardly curved blade, SI SW, Arrangement 1, up blast discharge, Herman Nelson Blower.



Backwardly curved blade, DI DW, Arrangement 3, bottom angular up discharge, Herman Nelson Blower.

Part of a shipment of 1015 Herman Nelson Blowers used in heating trailers for the armed forces.



Backwardly curved blade, DI DW, Arrangement 3, top horizontal discharge, Herman Nelson Blower.

The Herman Nelson Corporation is a member of the National Association of Fan Manufacturers. Herman Nelson blowers are tested and rated in accordance with the standard test code as adopted by the National Association of Fan Manufacturers and the American Society of Heating and Ventilating Engineers.

THE HERMAN NELSON CORPORATION

Manufacturers of Quality Heating and Ventilating Products

GENERAL OFFICES: MOLINE, ILLINOIS • FACTORIES AT MOLINE AND CHICAGO, ILLINOIS

ANNOUNCING
The Pencil Points - "PITTSBURGH"
Architectural Competition
for the design of
"A House for Cheerful Living"
$10,000 IN PRIZES · COMPETITION CLOSES FEB. 26, 1945

"PITTSBURGH" believes that the near future will see the resumption of an already well-established trend toward the use of more glass in American houses. This trend has manifested itself in larger window areas, in a more extensive use of mirrors and glass blocks, in wider application of structural, plate, tempered and other kinds of glass.

Since architects have been the leaders in applying both the principles of modern science and the products of modern technology in the design of ever-better residences, Pittsburgh Plate Glass Company and Pittsburgh Corning Corporation take pleasure in sponsoring this architectural competition, instituted to encourage possible further developments in the field of domestic architecture, and to extend the general understanding of the intelligent uses of glass and glass products.

The problem calls for designing a house for a family of four in a typical metropolitan suburban community, anywhere in the United States.

The competition is authorized by the Reinhold Publishing Corporation, publishers of Pencil Points. It will be conducted by Kenneth Reid, A.I.A., as Professional Adviser, and judged by seven architects of proven distinction.

It is open to all architects, architectural draftsmen and architectural students. Members of the American Institute of Architects, under a ruling by the Institute Committee on Competitions, are permitted to enter.

There are no entry blanks or entry fees involved. The winning designs will be widely publicized throughout the country . . . and any resulting inquiries about them will be referred to the authors of the respective designs.

We urge you to send the coupon today for a reprint of the Official Program and latest literature containing up-to-date information on glass and its use. This material will be of real assistance to contestants. The Official Program appears in the December issue of Pencil Points.

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Third Prize	1,000
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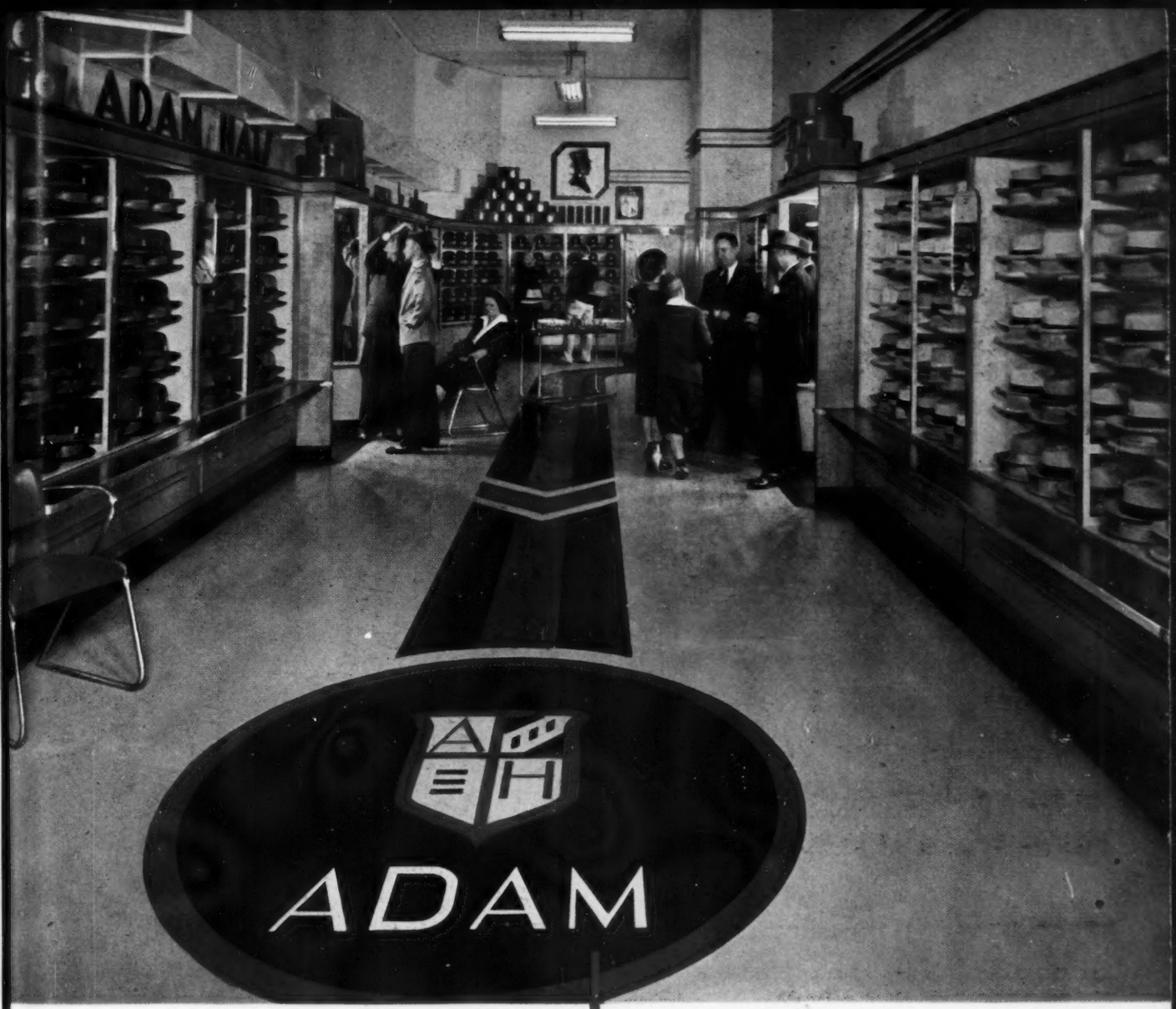

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Management, salesmen, and customers all appreciate the long wear, the cleanliness, the resilience, the ease-under-foot, and the attractive appearance of this cleverly designed Nairn Linoleum floor in the Adam Hat Store in Dallas. Colorful, readily "personalized" or decorated for any desired effect, Nairn Linoleum offers most intriguing possibilities to the architect or designer. And its well-proved wear-resistant qualities insure long, trouble-free, and economical service, even in areas of heaviest traffic. A handbook on linoleum specifications has been prepared for your use. May we send you your copy? CONGOLEUM-NAIRN INC., KEARNY, N. J.

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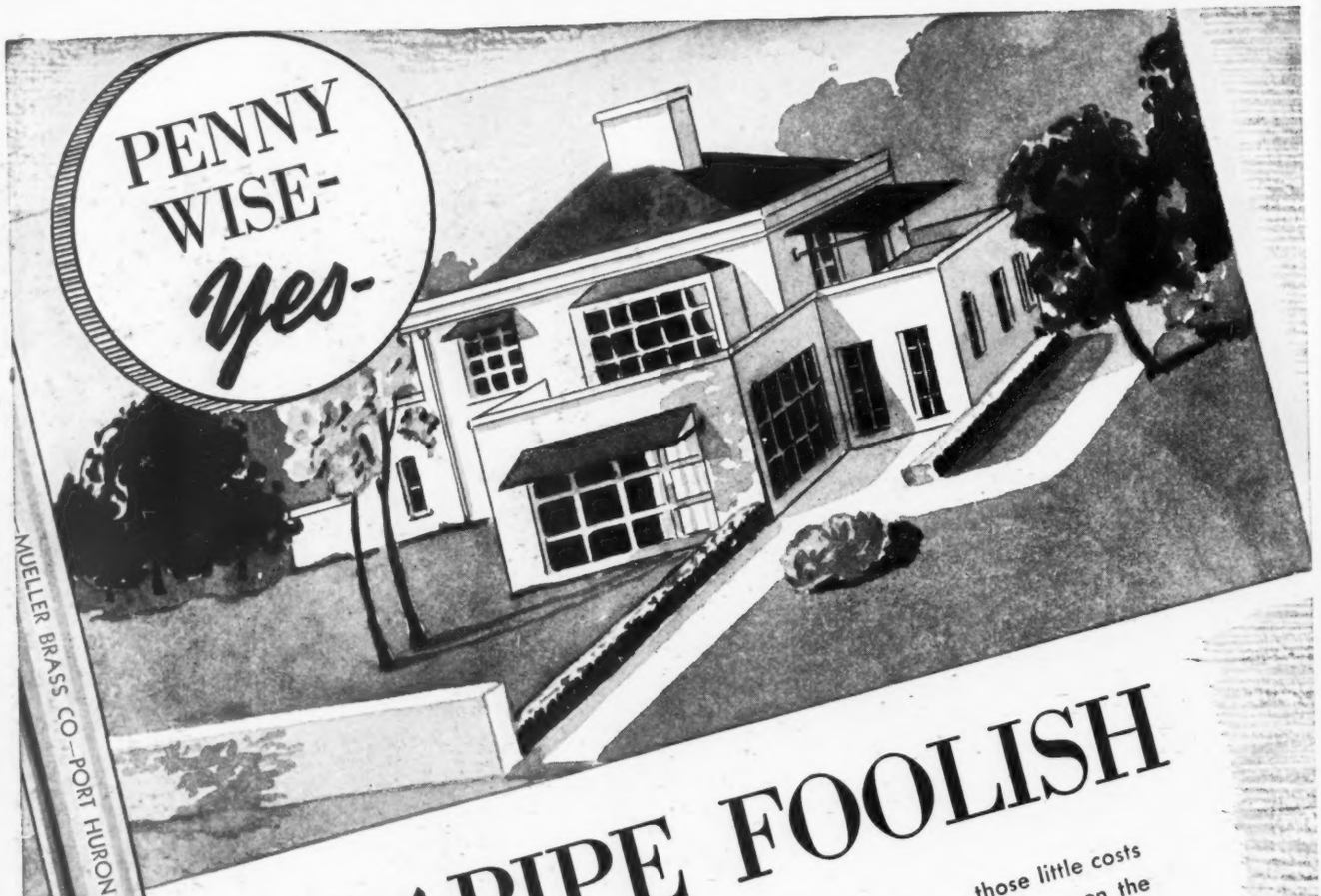

PENNY WISE- *Yes-*

BUT *Not* PIPE FOOLISH

● It is sound business to watch the little costs in building . . . those little costs that collectively mount to larger totals, but . . . saving a few cents or dollars on the initial costs of ***vitally important*** items, such as the piping system, at the expense of enduring quality, is false economy . . . The pipes which supply hot or cold water to kitchen, laundry and bathroom fixtures, are the ARTERIES OF THE HOUSE and are one of the most important items in it.

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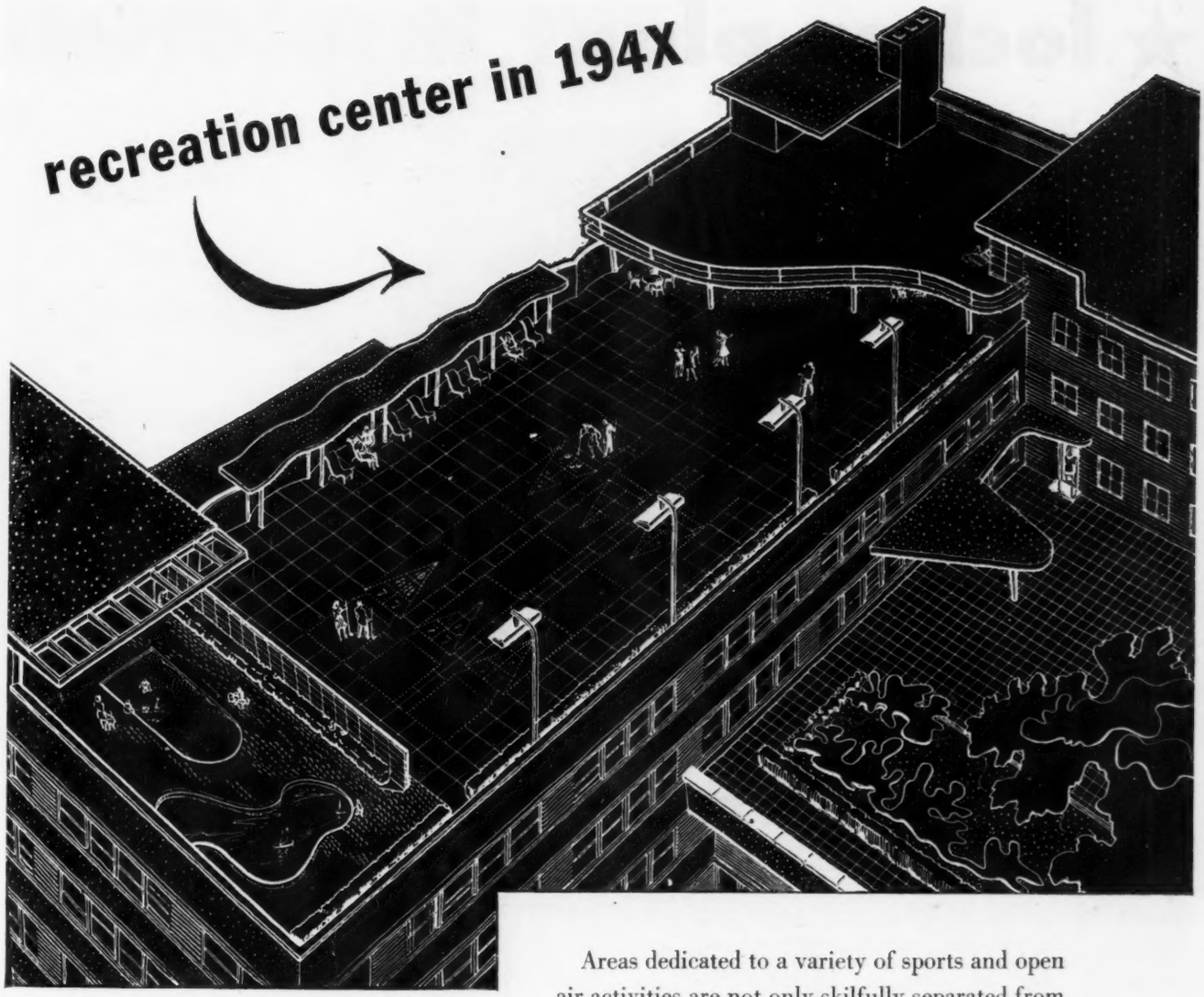

A practical approach to the problem of open-air recreation in urban areas is efficiently provided by this original plan, developed by the New York architectural firm of Ely Jacques Kahn and Robert Allan Jacobs.

Unlike the waste spaces that characterize the roof-tops of most of today's buildings, this project utilizes the roof for more than mere protection. In effect, it transfers to the top of the structure the surface of the plot on which it stands, supplementing the usefulness of the building and adding substantial value to the property.

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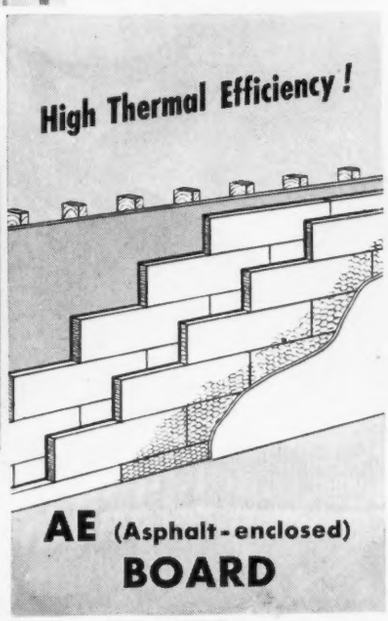

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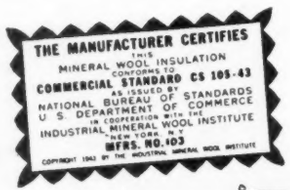
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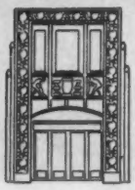

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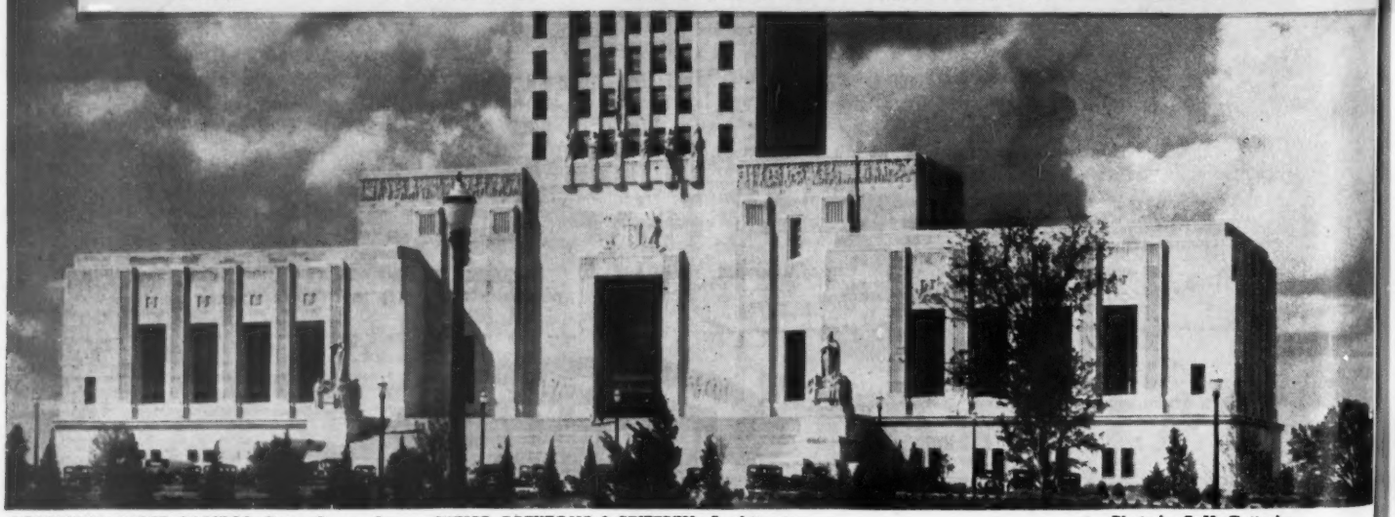

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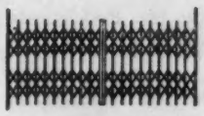

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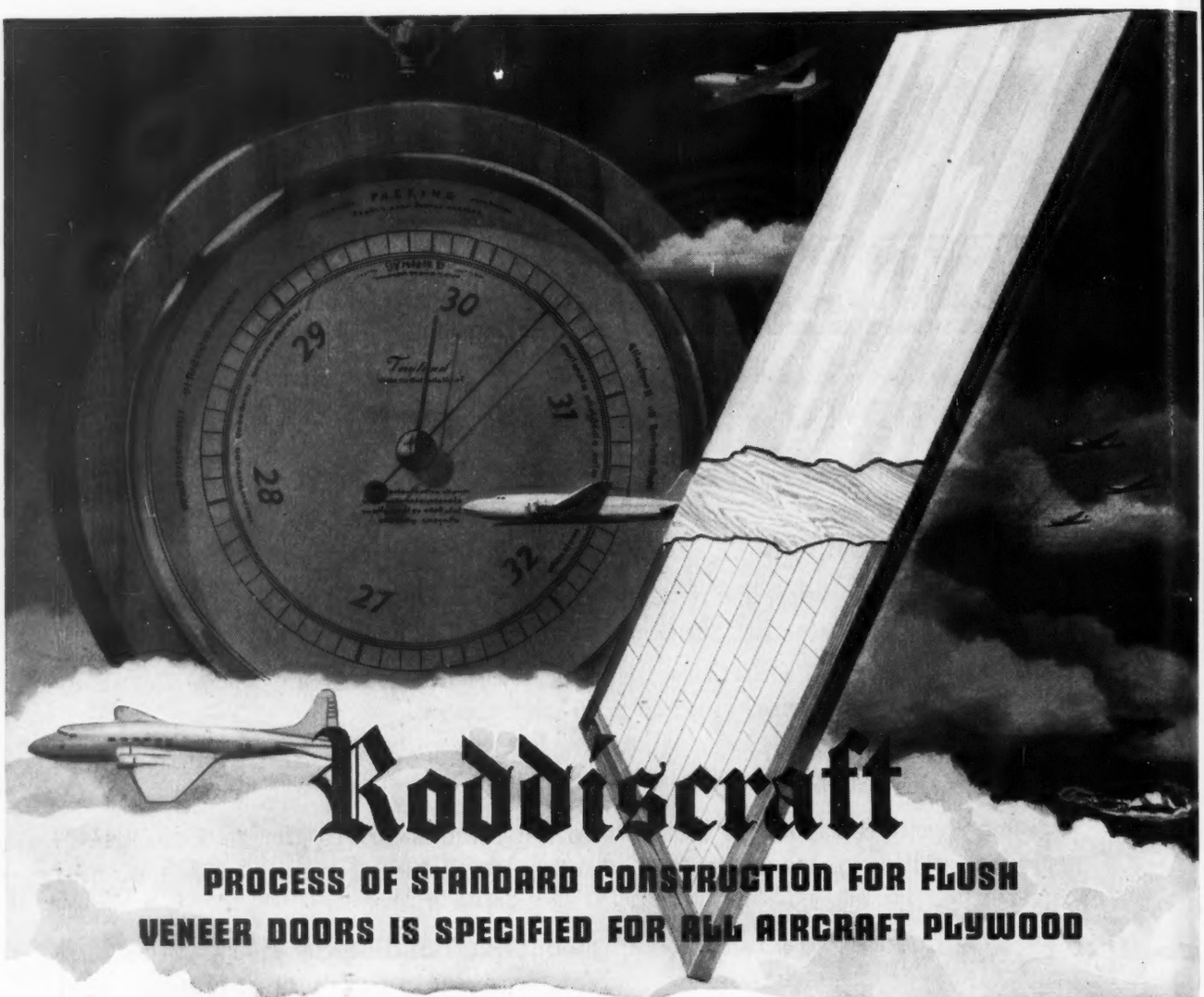

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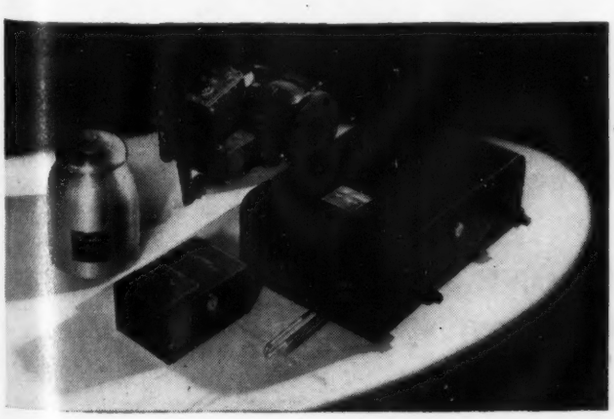

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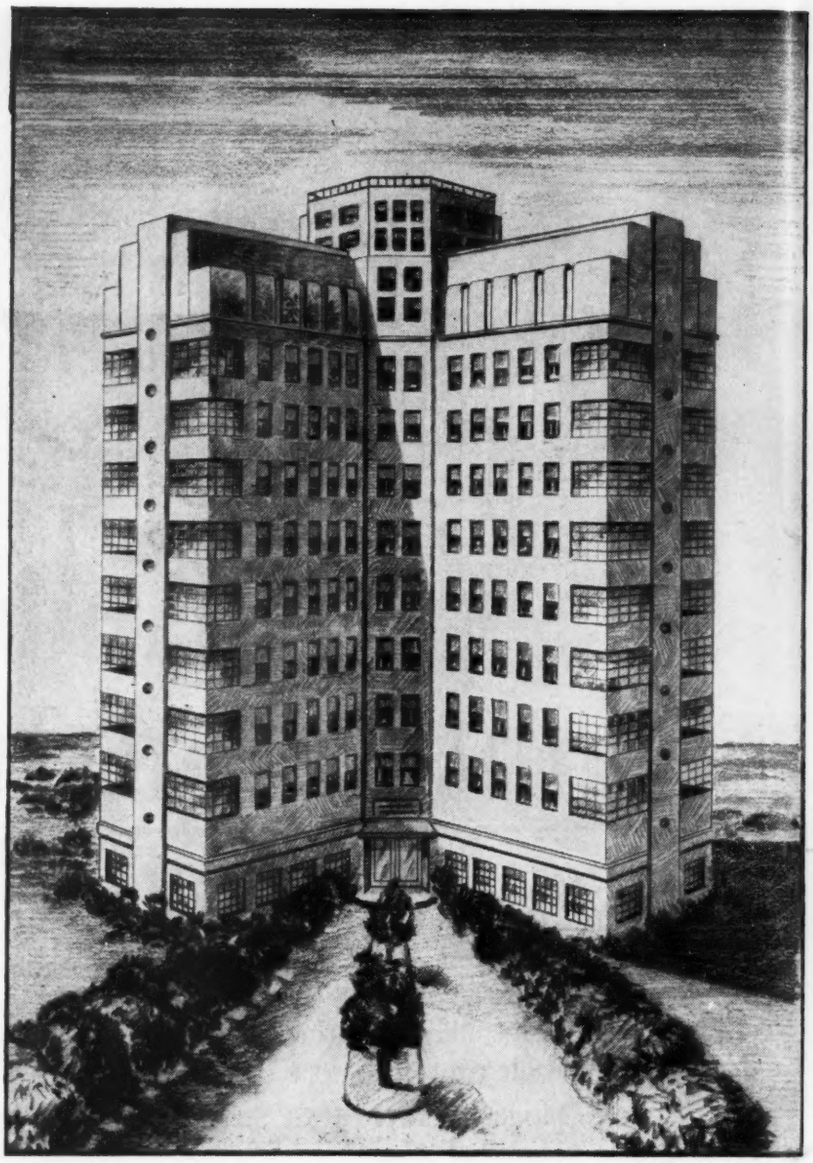

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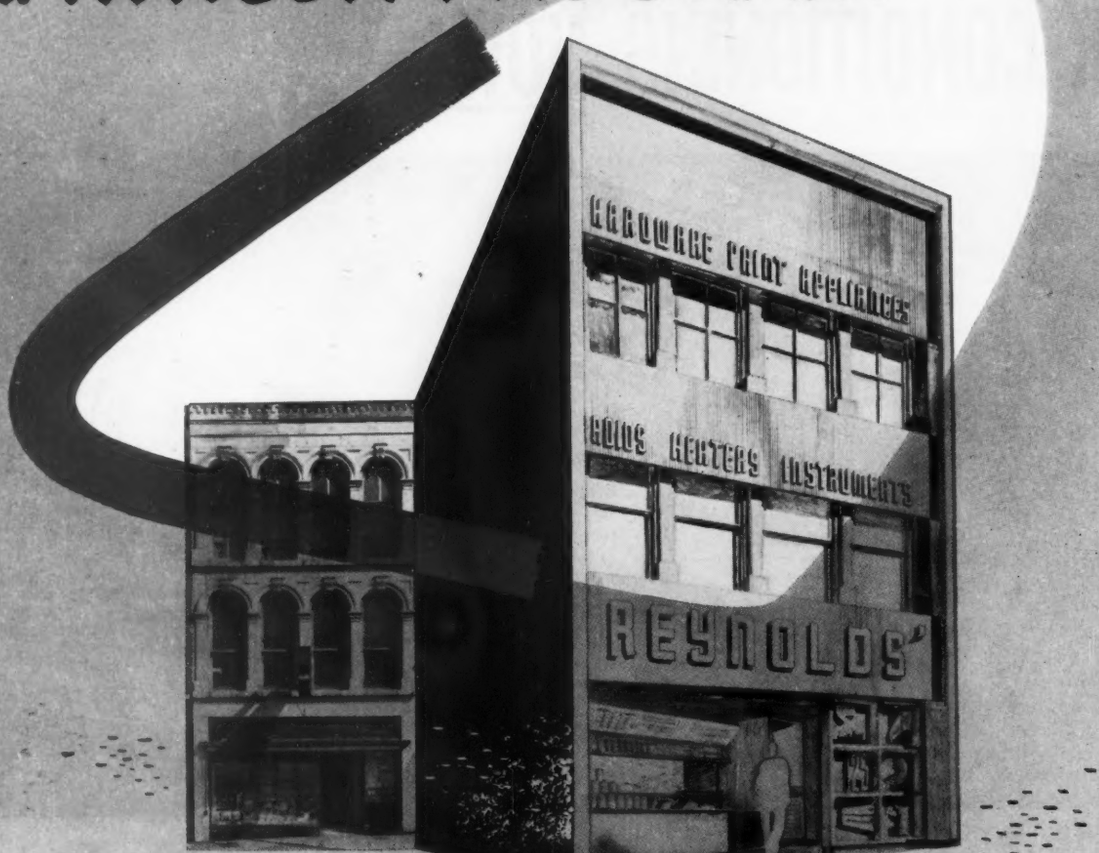

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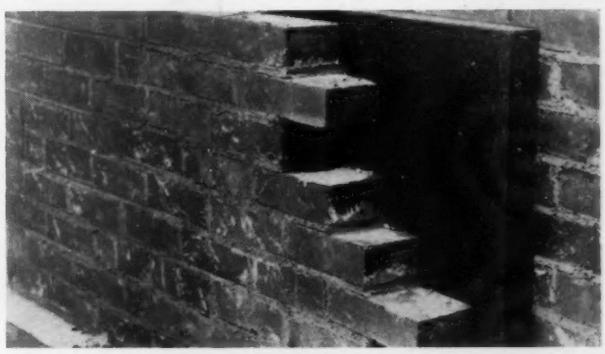

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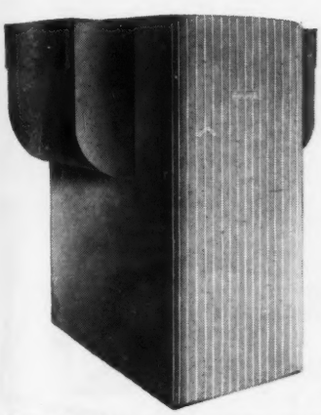
YOU CAN MAKE the post-war homes you design even more livable, efficient and comfortable with the new Servel *All-Year* Gas Air Conditioner. This new equipment represents an entirely new concept in all-year air conditioning. It permits you to offer your clients, for the first time, control of all factors affecting indoor climate.

The Servel *All-Year* Gas Air Conditioner maintains comfortable indoor temperatures and humidity the year round. In summer, it cools the air and removes sticky humidity. In winter, it heats the air, supplies just the right amount of humidity. In between seasons, when neither heating nor cooling is required, clean, filtered air can be circulated throughout the house. All three functions are controlled by the Servel Selectrol. Just a flick of a switch *selects any function of the unit* . . . . heating, cooling or independent air circulation. Just a setting of the dial *selects the temperature,* provides the *exact kind* of air conditioning and the *exact degree* of comfort desired.



Homes with *All-Year* Gas Air Conditioning not only are more comfortable; they're quieter, safer, more private. Windows can be kept permanently closed, banning outside dirt, noises, and damage from sudden summer storms. Or they can be locked, banishing the danger from prowlers. Paint, floor and wall finishes, rugs, draperies, and furniture require less frequent cleaning, stay fresh and new longer. And the cleaned, filtered air, freed from irritating dust and pollen and always properly humidified, is a boon to hay fever and asthma sufferers.

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For information on how to include this "New Quality of Living" in your post-war homes, get complete facts on the Servel *All-Year* Gas Air Conditioner now from your local Gas Company. Or write direct to Servel, Inc., 4412 Morton Avenue, Evansville 20, Indiana.

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Daylight ENGINEERING*—for MORE

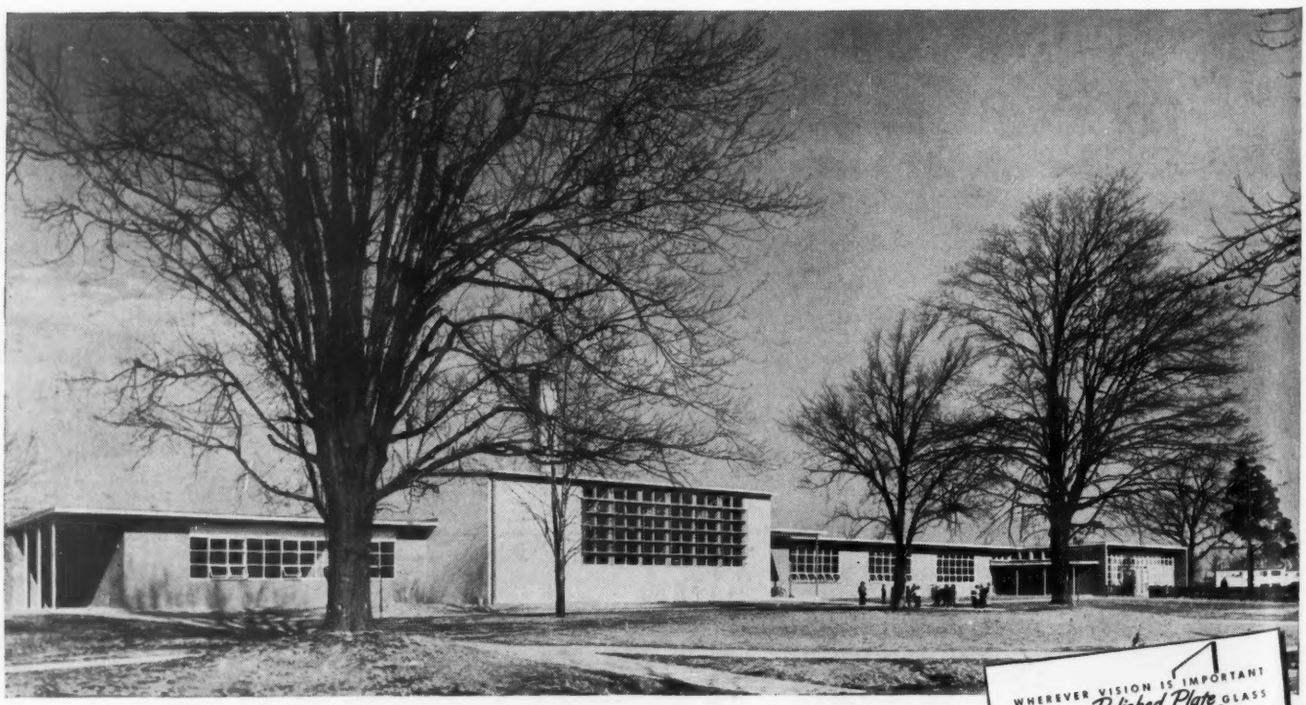
What is a child's attitude toward his school? Is he restless because he contrasts the gloom of his classroom with the pleasantness of outdoor sunshine?

Or does he enjoy a bright, cheerful classroom—as in the Norwayne Schools, at Wayne, Michigan? Architect H. Augustus O'Dell, speaking of the good daylighting in these schools, reports: "The modern educator wants proper school lighting, both natural and artificial. Windows, therefore, should be as continuous as possible and near the ceiling. Overwide mullions or piers between windows create dark spots which emphasize the light from the windows and produce glare. This, in general, was the principle of window design. The south and southeast Kindergarten and Day Care walls were made all glass, because such a room is more pleasant and provides ample illumination."

Although the Norwayne Schools were not specially designed for solar heating, Mr. O'Dell advises that solar input was beneficial, and that even rooms farthest from the central heating equipment required less furnace heat —even on gray, cold days.

Where large glass areas present a problem of heat loss, many architects are using Thermopane, the new factory-built insulating unit. Thermopane enables you to get both *daylight* and *full visibility* through an insulated area. For complete information about this double-glass windowpane, including technical data sheets by Don Graf, Technical Editor of Pencil Points, write to Libbey·Owens·Ford Glass Co., 11124 Nicholas Building, Toledo 3, Ohio.

O'Dell, Hewlett & Luckenbach, Detroit, *Architects.*



In spite of wartime building restrictions, the Norwayne Schools are attractive, permanent and thoroughly practical buildings. Throughout the buildings, good daylighting is provided with large areas of Libbey·Owens·Ford Glass.

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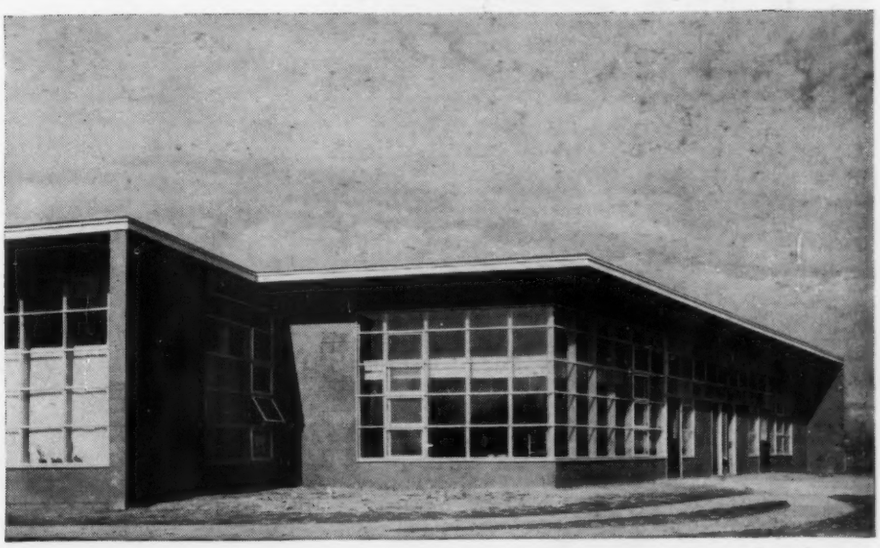
PRACTICAL, MORE LIVABLE SCHOOLROOMS

The large glazed area in this classroom assures good daylighting—and assures, as well, a pleasant "outdoor feel" that is an effective antidote to boredom.

*



A roof overhang shades the large windows from the high summer sun—allows direct sunlight to enter only when the sun is well below its zenith.

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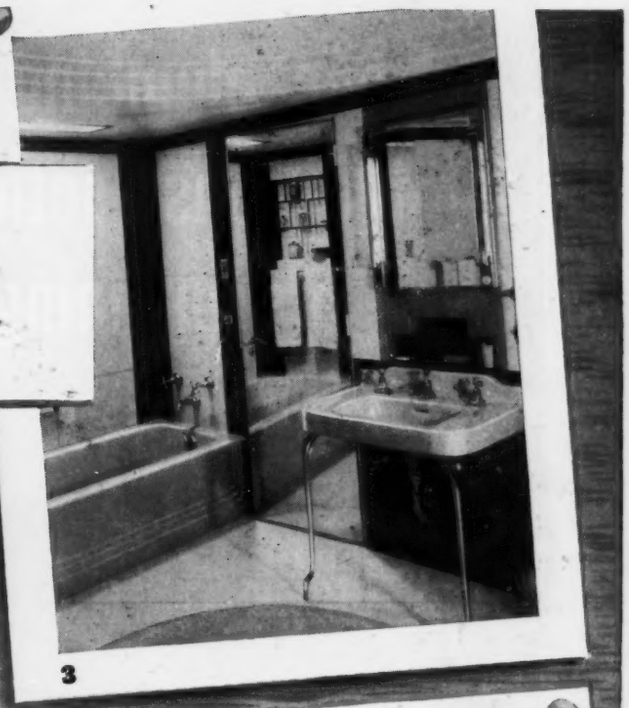

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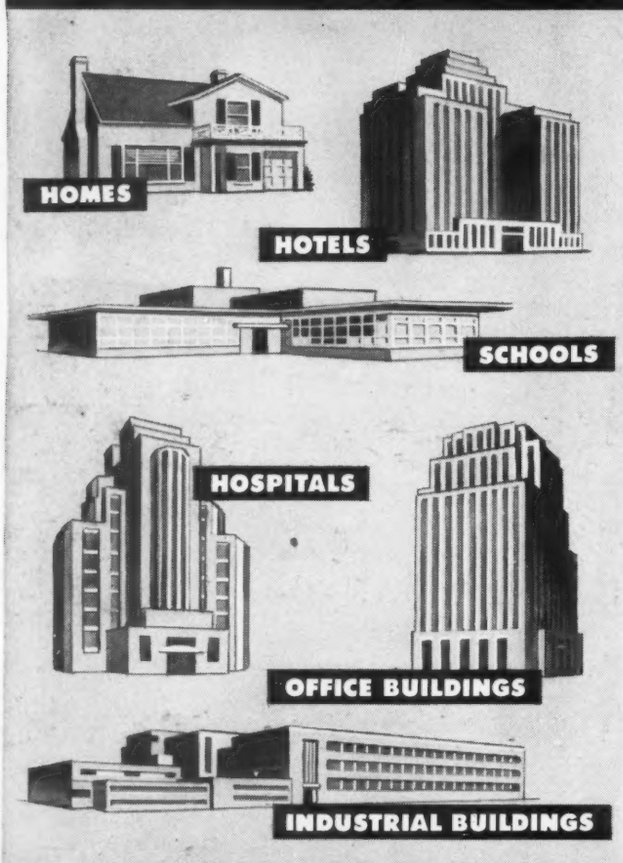

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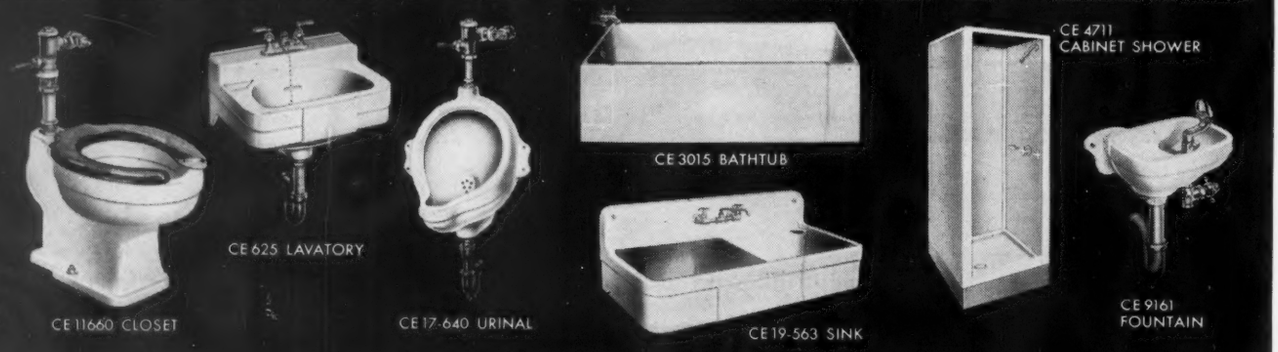

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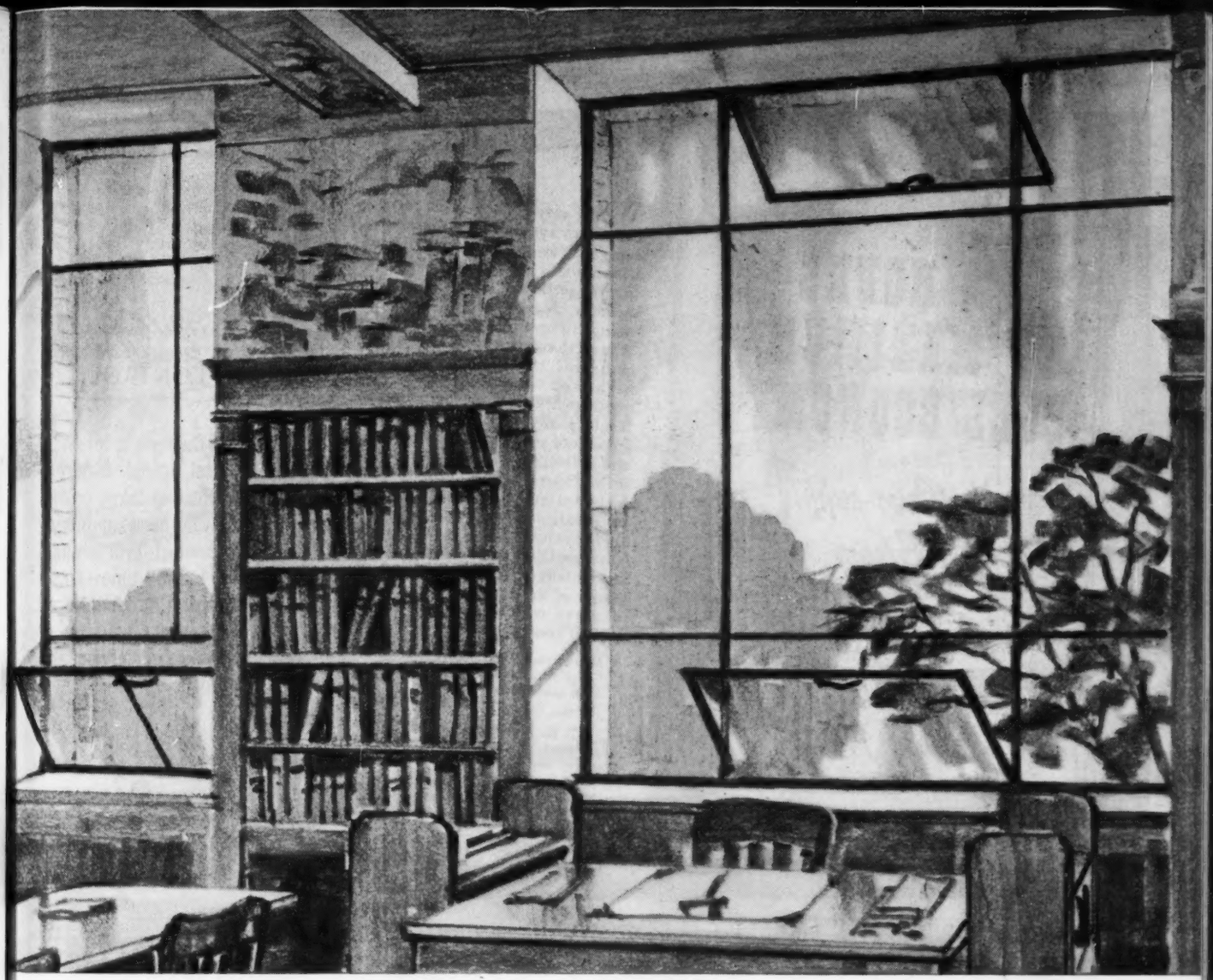

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12 Different Grand Master Keys pass 10,000 locks of its individual group but no others.
100 Different Master Keys pass 100 locks of its individual group but no others.
120,000 Different Change Keys pass one lock only — no others.
Note this is only an example — certain locks may be keyed alike as desired — more or less Master or Grand Master Key Systems may be used.

MASTER KEY SYSTEM	A		B		C		D	
	No. of Key Changes	No. of Locks Controlled by Each Key	No. of Key Changes	No. of Locks Controlled by Each Key	No. of Key Changes	No. of Locks Controlled by Each Key	No. of Key Changes	No. of Locks Controlled by Each Key
Great Great Grand Master Key	1	120,000	1	120,000				
Great Grand Master Key Sets — each set different	5	24,000	12	10,000	1	120,000		
Grand Master Key Sets — each set different under separate Great Grand Master Key Sets	10	2,400	100	100	50	2,400	1	120,000
Master Key Sets — each set different under separate Grand Master Key Sets	20	120	1	120,000	1	120,000	1	120
Change Key	120,000							

ALL KEYED UP *and 120,000 places to go . . . . . .*

MANY people think that master-keying makes for greater security—but the opposite is true. It's a matter of mathematics. The chart shows five systems in which 120,000 locks can be controlled with a single key. Any number of variations are possible to meet the needs of single buildings or large groups.

However, keying simplification is always advisable — keying alike does not decrease security, but the more you require in master, grand master and great grand master keying, the more you *decrease* security.

By all means take advantage of keying simplification wherever *convenient for the client* — insuring *protection of property* by eliminating unnecessary or complicated keying wherever possible.

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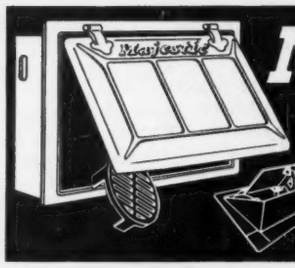

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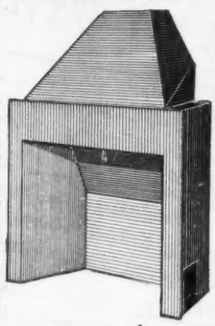

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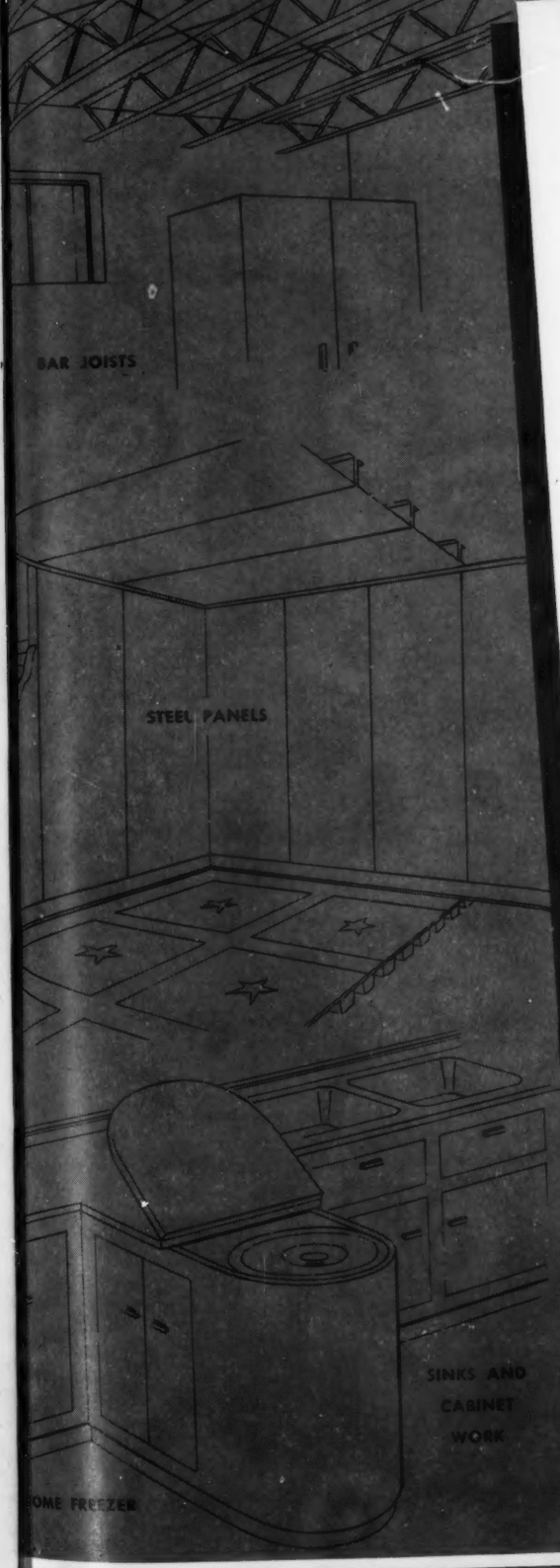

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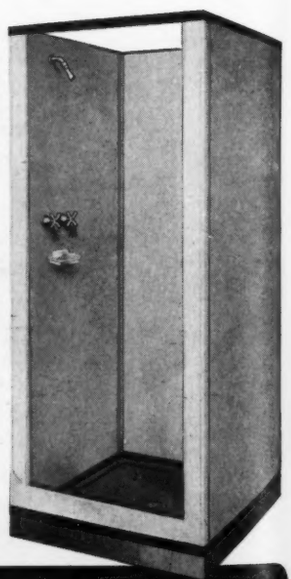

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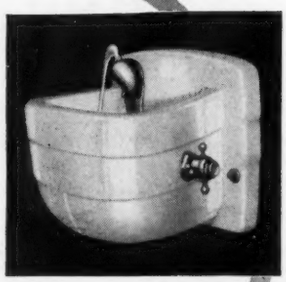

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Sustained educational advertising has emphasized the progress in design and construction . . . the vast improvements in materials.

In their post-war homes your clients want post-war design . . . the improved methods and materials available to them.

They're not expecting mechanical marvels, but indications are that they will demand increased comfort and convenience . . . more "livability".

More and more, Weldwood is helping architects achieve the results their clients demand.

And modern architects take advantage of the structural and decorative superiority of Weldwood whenever possible.

They know that Weldwood brings to a modest home the durability and beauty formerly enjoyed only in a mansion.

They know, too, that their clients will appreciate the increased purchasing investment value that Weldwood gives a building dollar.

They know that a Weldwood home is delightfully livable . . . that comfort and convenience are "built in" features. That the durable beauty of Weldwood-paneled walls appeals to everyone.

You'll find that clients appreciate . . . and will buy . . . the comfort, utility and charm that you can design into their homes with Weldwood.

HERE'S *WHY* YOUR CUSTOMERS WILL WANT WELDWOOD:

STRUCTURAL ADVANTAGES

Dri-wall construction cuts building time as much as six weeks . . . eliminates dangers of warping, swelling and cracking in sash and woodwork due to the tons of water in plaster walls. All standard grades of Douglas Fir plywood are made in Weldwood's giant West Coast plants.

DECORATIVE FEATURES

Weldwood . . . in genuine mahogany, walnut, oak, knotty pine, figured gum, birch and Weldtex (striated Weldwood) . . . achieves the warmth and beauty of wood-paneled rooms at unbelievably low cost. Modern streamlined production has made this possible.

Inexpensive Weldwood Utility Panels, with satin-smooth hardwood faces, provide ideal wall surfaces for paper or paint . . . never show checking or grain-raise.

ECONOMY

Final results balanced against investment show Weldwood Plywood construction to give far more value per dollar than old-fashioned materials.

Because Weldwood can be installed rapidly . . . inside and out . . . building time is cut down, with resultant savings in labor cost.

DURABILITY

Weldwood Plywood Panels are crack-proof and are guaranteed for the life of the building. Weldwood walls are permanent walls, requiring no upkeep.

Weldwood
Plastics and Wood Welded for Good

Waterproof Weldwood, so marked, is bonded with phenol formaldehyde synthetic resin. Other types of water-resistant Weldwood are manufactured with extended urea resins and other approved bonding agents.

THE MENGEL FLUSH DOOR

Strength and Beauty . . . to match your Weldwood walls.

WELDWOOD Plywood

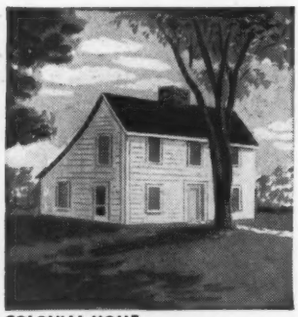
Weldwood Plywood and Plywood Products are manufactured and marketed by

UNITED STATES PLYWOOD CORPORATION *New York, N. Y.*

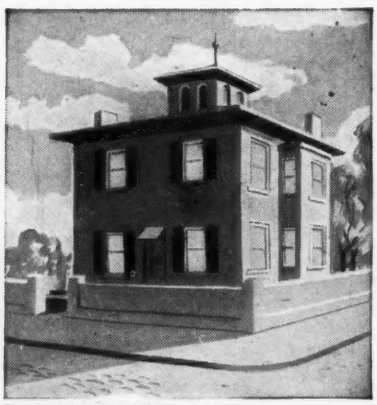
THE MENGEL COMPANY *Incorporated Louisville, Ky.*

Distributing units in Boston, Brooklyn, Chicago, Cincinnati, Cleveland, Detroit, High Point, Los Angeles Newark, New York, Oakland, Philadelphia, Rochester, San Francisco, Seattle. Also U.S.-Mengel Plywoods, Inc distributing units at Atlanta, Jacksonville, Louisville, New Orleans. **Send inquiries to nearest point.**

FIRST PURITAN HOME



COLONIAL HOME



POST REVOLUTIONARY HOME

A Housing Trend

In magazines, in industry forums, in private discussions, more and more builders are giving advance notice of their intention to build "all-electric" houses after the war.

It is increasingly obvious that a great many newly built houses will capture the buyer's attention with built-in electrical equipment.

Most leaders of this new trend in construction see the "all-electric" home as an adequately wired house, completely equipped with electric refrigerator, range, dishwasher, automatic heating, and other electric appliances. Many contractors are planning to include laundry equipment as well.

Advantages all around!

The homebuyer will get all the electrical equipment he needs . . . designed and built right into the house. And there is a growing trend to include such equipment under the mortgage.

Such inclusion will give the homebuyer efficient equipment on much better terms than if he purchased the equipment separately . . . and with little additional immediate cash outlay. The slight increase in the size of amortization payments will usually be more than offset by the resulting savings in the total cost of operating the home.

A fully equipped home also becomes a sounder

VICTORIAN HOME

G-E ALL-ELECTRIC HOME

Worth Watching...

mortgage investment for the banker because such a home will continue to be "modern" for many years to come.

Naturally, the builder is going to profit from the increased satisfaction to the buyer. His houses will be easier to sell . . . his reputation will be enhanced.

We'll be glad to help

For the past eight years, The General Electric Home Bureau has been making an intensive study of the problems involved in the "all-electric" home.

There may be some questions you'd like to ask . . . possibly concerning the cost of owning and operating quality electrical equipment. We have answered many such questions in our brochure "Your New Home and Your Pocketbook." We'll be glad to send you a copy of this brochure upon request. Home Bureau, General Electric Co., Appliance & Merchandise Department, Bridgeport, Conn.

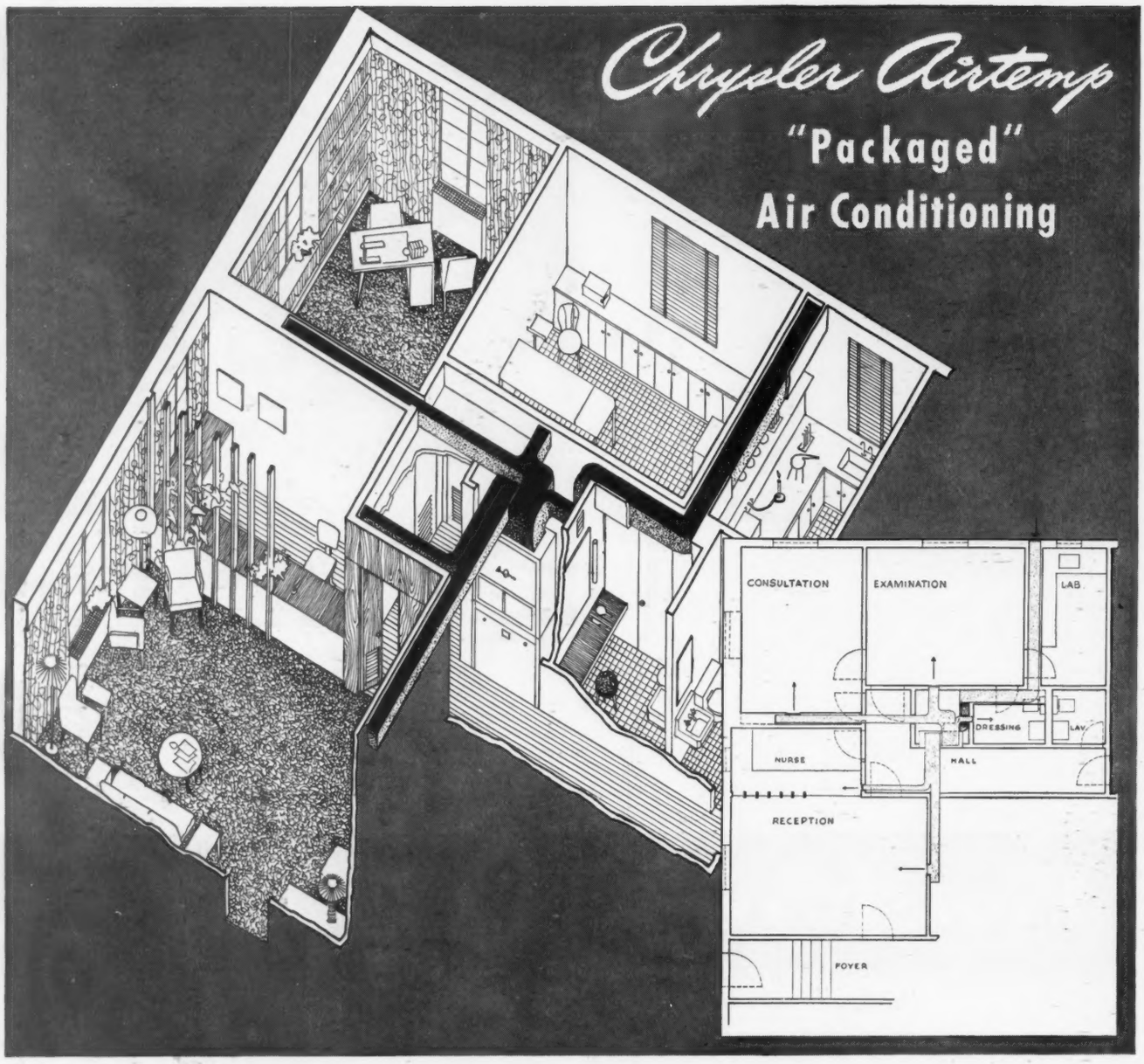
FOR VICTORY

General Electric is working night and day to back the attack. You can help, too, by buying and holding more War Bonds than before.

TUNE IN: "The G-E All-Girl Orchestra," Sunday 10 p. m., E. W. T., NBC—"The World Today" news, every weekday, 6:45 p. m., E. W. T., CBS.

EVERYTHING ELECTRICAL FOR AFTER-VICTORY HOMES

GENERAL ELECTRIC



An Aid to Physician and Patient

The hot, muggy days of summer cause increased tension and discomfort. That is why Chrysler Airtemp "Packaged" air conditioning is welcomed by physician and patient.

The cool, clean, dry air creates a restful, invigorating atmosphere, free from unpleasant odors. Instruments are more easily handled. In fact, throughout the profession, air conditioning is a postwar must.

Chrysler Airtemp "Packaged" air conditioners are shipped ready to run. Easy to install, flexible in application, quiet and trouble-free in performance . . . these self-contained units, singly or in multiple, are ideal for professional suites and clinics.

No wonder architects are turning to Chrysler Airtemp in making estimates, not only on air conditioning, but for heating and commercial refrigeration as well. Airtemp Division of Chrysler Corporation, Dayton 1, Ohio • In Canada, Therm-O-Rite Products, Ltd., Toronto.

Buy More War Bonds! Tune in Major Bowes every Thursday, CBS., 9 p. m., E. W. T.

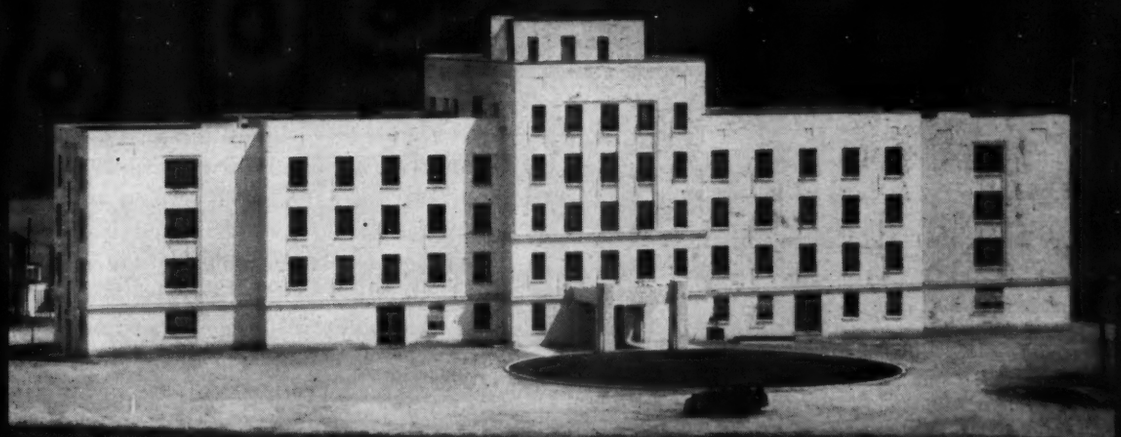
CHRYSLER AIRTEMP

HEATING • COOLING • REFRIGERATION

The Name **HOPE'S** *Guarantees*

1818 **WINDOWS** 1944

FOR INSTITUTIONS, HOSPITALS and SANATORIUMS



Denmar Sanatorium, *Greenbriar River Valley, Denmar, W. Va.* J. C. Burchinal, *Architect*

The special advantages of Hope's Steel Windows contribute alike to plans for distinguished architectural style and to the ever-present considerations of utility, convenience and mechanical reliability. To such buildings as hospitals and schools, the casement design offers draftless ventilation and convenience and safety of cleaning from the inside. Wherever used, Hope's Windows offer superior weather-tightness and durability, maximum daylight, and provide a wide variety of layout.

Our Engineering Department will be glad to prepare drawings to suit unusual conditions.

HOPE'S WINDOWS, INC., *Jamestown, N. Y.*

BACK THE ATTACK ☆☆☆ BUY WAR BONDS

An Engineer Commends

the installation-engineering details supplied for all applications of

PETRO OIL BURNING SYSTEMS

WILLIAM H. DUSENBURY is a prominent New York engineer, a member of the firm of W. H. & J. F. Dusenbury, who have been consulting engineers for many millions of dollars worth of building over the country. Among these buildings are the Bethlehem-Fairfield Shipyards in Baltimore; Sears Roebuck and Company in Arlington, Va.; Schick Corporation in Stamford, Conn.; Alice Hyde Memorial Hospital in Malone, New York; Borden's Farm Products Bottling Plant, Riverside Memorial Chapel, Coca-Cola Bottling Company, Number One Fifth Avenue Apartments, all in New York. Mr. Dusenbury has personally supervised the installation of numerous Petro Systems, and based on long experience he comments on their use.

"Regarding the engineering features of the Petro burner I have always found that, integrated into the installation, are such important features as draft stabilization, firebox shape and volume, and the proper control of oil temperatures at the input point.

"To my knowledge the records on Petro installations over a long period show a minimum repair and maintenance cost and their low fuel costs are well known to heating engineers. I am now planning for the use of oil in several postwar projects and feel sure that Petro equipment and service will continue with their high standards."

Mr. Dusenbury's first sentence in the foregoing quotation contains a substantial part of the reasons for the excellent performance record he outlines briefly in his next sentence.

This engineering service should not suggest any narrow limits to the efficient application of Petro Systems. On the contrary, the service is maintained because Petro is so widely applicable that, to insure traditional Petro performance in a specific project, the operating characteristics of that specific installation must be skilfully provided for and co-ordinated.

Any standard type or make of operating controls, furnace materials and other accessories may be used if specifier or client has any preference. Our engineers are familiar with all accepted adjuncts to proper operation and use them all constantly where such use will contribute to good operation.

Mr. Dusenbury's reference to "control of oil temperature at the input point" reflects the proportion of large projects he has supervised, in which pre-heated oils are burned. For these the Petro Thermal Viscosity system of controlling oil temperature and supply to the furnace is the only method which does not require constant attention to mechanical re-adjustments. Thermal Viscosity is a principle rather than a device; it contributes definitely to oil and labor saving; and like other factors in Petro Systems, it allows for individual preferences for accessories.

To the Engineer or Architect in charge of any oil-fired project, the flexibility of Petro Systems supported by Petro Engineering offers certainty of long term operation and economy in the finished installation.

INDUSTRIAL MODELS

#5 or #6 fuel oil—manual, semi- or automatic operation — 8 sizes to 450 bhp. "Thermal Viscosity" preheating.

PETRO

Cuts Steam Costs

DOMESTIC MODELS

#3 or lighter oils—"conversion" and combination-unit types—7 sizes "Tubular Atomization" (patented)

Full data on Petro Industrial Burners are in Sweet's—or Domestic Engineering—catalog files. Details on Petro Domestic burners available in separate catalog. Copy of either sent gladly on request.

PETROLEUM HEAT AND POWER COMPANY

STAMFORD ***Makers of good Oil Burning Equipment since 1903*** **CONNECTICUT**

LOOKING INTO SPACE

Architect—George Fred Keck, Chicago, Ill.

What will the postwar house look like? No one knows—*exactly!*

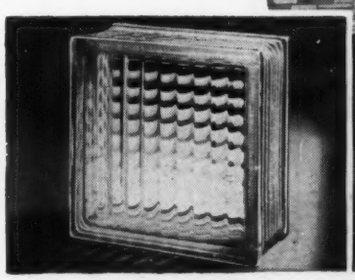
Many designers are breaking away from the architectural forms of the past. They are thinking of space for what it *does*. Not just as *rooms!*

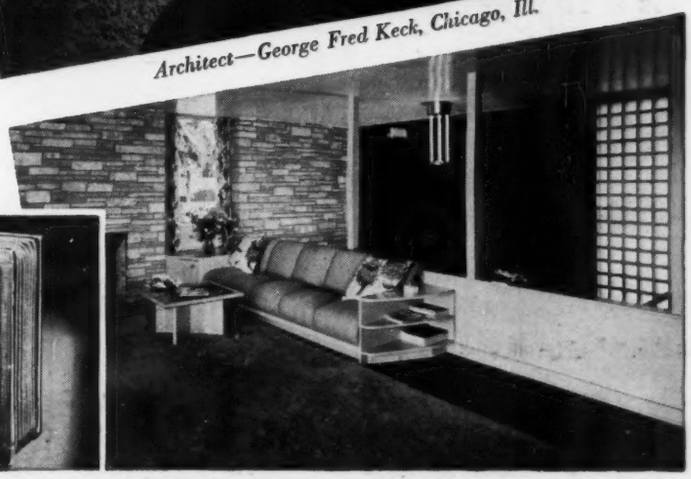
Whatever the accepted form may be—one thing is certain: Architects will make good use of our wonderful new building materials. Plastics—plywood—cork—synthetic rubber—light metal alloys—glass and glass block!

Many of the new homes are sure to display lustrous, light-flooded panels of Insulux Glass Block.

Insulux is a practical as well as a beautiful building material. It transmits natural daylight. It provides privacy. It reduces heat loss and condensation. It keeps out noise and dirt. And it is easy to clean—and to keep clean.

Panels of Insulux can be used to brighten an entry way or to add new beauty to a kitchen, living room, bedroom or bath.





Architect—George Fred Keck, Chicago, Ill.

Insulux Glass Block is a functional building material—not merely a decoration. It is designed to do certain things that other building materials cannot do. Investigate!

OWENS-ILLINOIS

INSULUX

GLASS BLOCK

For technical data, specifications, and installation details, see our section in Sweet's Architectural Catalog, or write: Insulux Products Division, Dept. 108, Owens-Illinois Glass Company, Toledo, Ohio.

Longer Life, Better Service

are Built into the Postwar Craw-Fir-Dor

Remember

the new better-than-ever Craw-Fir-Dor will be ready the moment the reconversion "go-ahead" is given!

WHEN you specify a Craw-Fir-Dor for postwar residential garages you can do so with utmost confidence in the sturdiness, durability and reliability of this famous overhead type garage door.

•

Just as soon as war needs permit, the Crawford Door Company (maker of Craw-Fir-Dor hardware) will swing into production of a new and improved Craw-Fir-Dor unit —a unit made better by two factors:

1—The valuable experience gained through manufacture of precision airplane parts.

2—An extensive research program has explored and developed every improvement which would result in easier installation, longer life and more trouble-free operation.

For special residential or industrial installations, write: Crawford Door Co., Detroit, Mich., who make a complete line of sectional overhead-type doors.

Fir Door Institute

Tacoma 2, Washington

Craw-Fir-Dor

SELF-ENERGIZING · ONE PIECE · OVERHEAD TYPE

GARAGE DOOR

Finer Drafting Room Equipment
PRECISION INSTRUMENTS

ESCO Product
REG. U.S. PAT. OFF.

"Symbol of Superiority"

for Architects Navigators Engineers Draftsmen Artists and the **SCHOOLS OF THE NATION**

ESCO Product

T-SQUARES
TRIANGLES
PARALLEL RULERS
STRAIGHT EDGES
DRAWING KITS
TABLES
DRAWING BOARDS

ESCO

Our New Automatic Tilt-Top Table, also our NEWEST DRAFTEDGE MACHINE (Patent Pending)

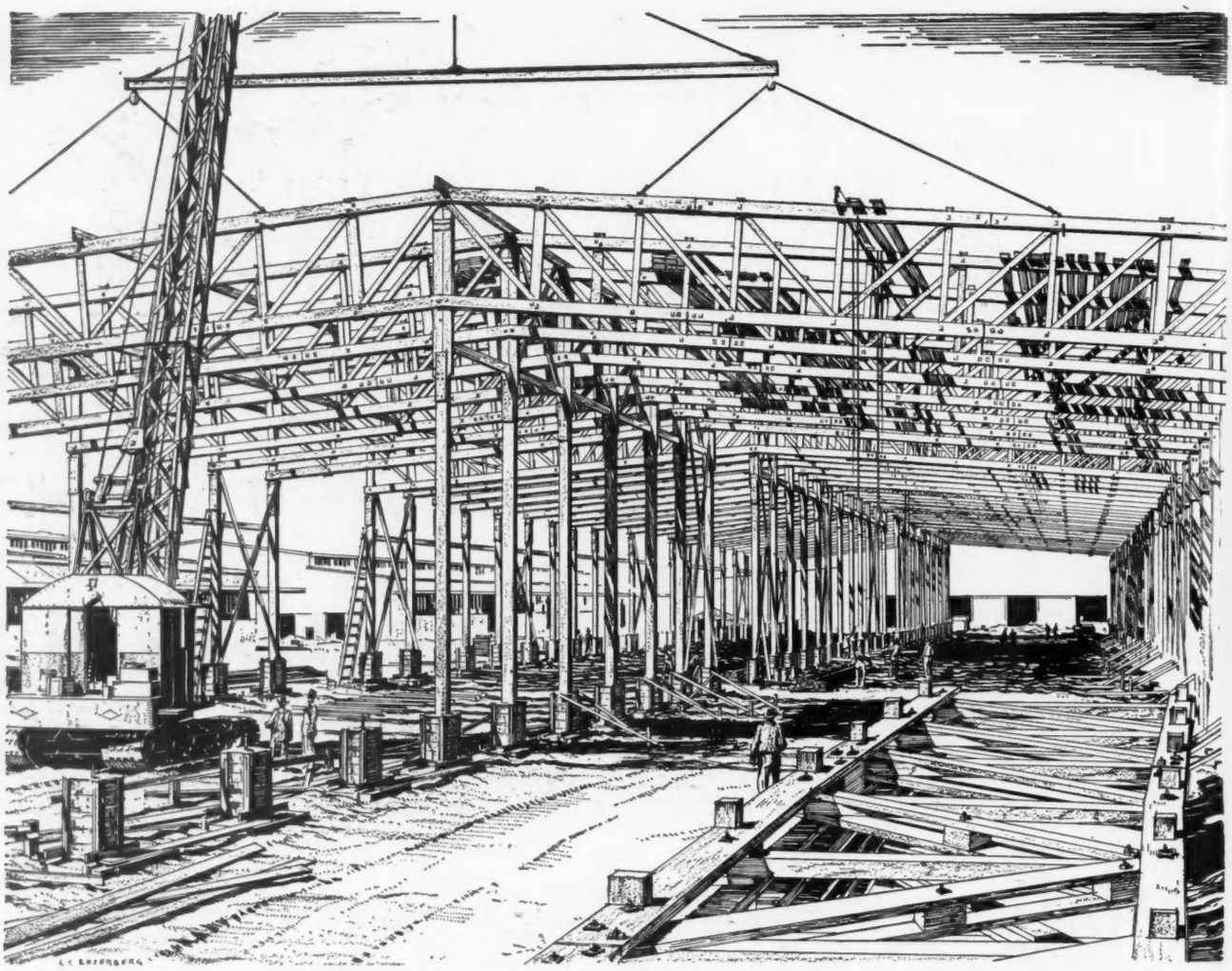
DEALERS will profit by window displays of ESCO Products—Write for our NEW 4-colored die cut DISPLAY CARD Size 14 x 22

New!! ADJUSTABLE AND REVOLVING DRAWING BOARDS

"A Craftsman is no better than his tools"

WE HAVE THE TOOLS FOR DELIVERY NOW!

SHEBOYGAN **ENGINEERING MANUFACTURING CO.** WISCONSIN



ARMY WAREHOUSES. 2304 flat top roof trusses for 12 buildings (200' x 800') prefabricated and erected by Timber Structures, Inc. Pen drawing by Louis C. Rosenberg, internationally known etcher and renderer. A copy suitable for framing will be mailed free to architects and engineers on professional letterhead request.

Good Machinery Deserves Good Housing

...BUILD WITH TIMBER STRUCTURES

The war has spotlighted the importance of warehouses. Thousands of such structures have been built for essential civilian industry and for the armed forces in recent years; thousands more will be needed to serve American postwar business activities.

The Timber Structures organization specializes on roof truss construction for warehouses and general utility buildings. Much of our experience in the past ten years has been the fabrication of trusses and other timber items for this type of building; much of our future service to architects, engineers, contractors, management will be in the broad field of industrial warehouse design and fabrication.

Clear Floor Space

The necessity for large areas of clear floor space requires the use of roof trusses long enough and strong enough to support necessary loads with a minimum of posts and columns. Teco ring-connected trusses of wood have proved to be suited to this type of construction, particularly when Timber Structures *Engineering in Wood* policy is applied to the particular problem in hand.

This policy starts with engineering and design, follows through to fabrication, assembly, inspection, shipping and (if desired) erection. All are part of our service. All are responsible for the construction speed, economy, strength, low maintenance and permanence of roof trusses and other heavy timber items supplied by us.

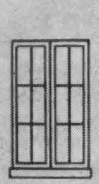
Your current or future building program may be such that you can use our services. Inquiries are welcomed on the use of timber and allied structural materials. Illustrated literature covering warehouse and other industrial construction on request.

TIMBER
WARD MAYER
STRUCTURES
INCORPORATED

Portland 8, Oregon New York 17, N.Y.

PARK SCHOOL, OSSINING, N.Y. FREDERICK MATHESIUS, *Architect*

for SCHOOLS HOSPITALS APARTMENTS OFFICE BLDGS.



WINDOWS

REVOLVING DOORS

ARCHITECTURAL METALWORK

TABLETS

STATUARY

Tomorrow's WINDOWS will be ALUMINUM!

Tomorrow more schools, hospitals, apartments and office buildings than ever will have aluminum windows.

Smart-looking aluminum windows by General Bronze will help keep your new building "modern" looking for years to come. Their neutral color blends harmoniously with any building material. Their weather-tightness, ease-of-operation and low maintenance costs are sure to be appreciated by your most exacting clients.

Before your present plans get too far along, we suggest that you investigate General Bronze's line of aluminum windows. As the largest producer of non-ferrous windows before the war—and with newly enlarged facilities available after the war, General Bronze will be in a position to give you the finest in windows—either aluminum or bronze—double hung, casement, or projected —at prices that will make them a "must" for every building. For complete information on General Bronze products consult Sweet's or write for the name of our nearest representative.

GENERAL BRONZE CORPORATION

34-19 TENTH STREET LONG ISLAND CITY, N. Y.

FIVE CONSECUTIVE ARMY-NAVY "E" AWARDS

"Spot Ventilation" MEANS Blo-Fan
UNIQUE COMBINATION OF FAN AND BLOWER PRINCIPLES

Good riddance to unwanted odors!

BLO-FAN "SPOT" ventilation rids the home of unwanted odors *at their sources* —in kitchen, bath, gameroom, laundry. Grease and smoke-laden vapors are whisked away before they soil walls, draperies or furnishings.

No cooking odors penetrate the house to tattle on dinner menus.

The unique patented principles of this ceiling fan combine the *volume of a breeze fan with the power of a blower.*

SPECIFY
Blo-Fan

PRYNE & CO., INC.
1245 E. 33rd St. • LOS ANGELES, 54
BRANCHES (TO BE RE-ESTABLISHED AFTER THE WAR)
SAN FRANCISCO • SEATTLE • CHICAGO • NEW YORK

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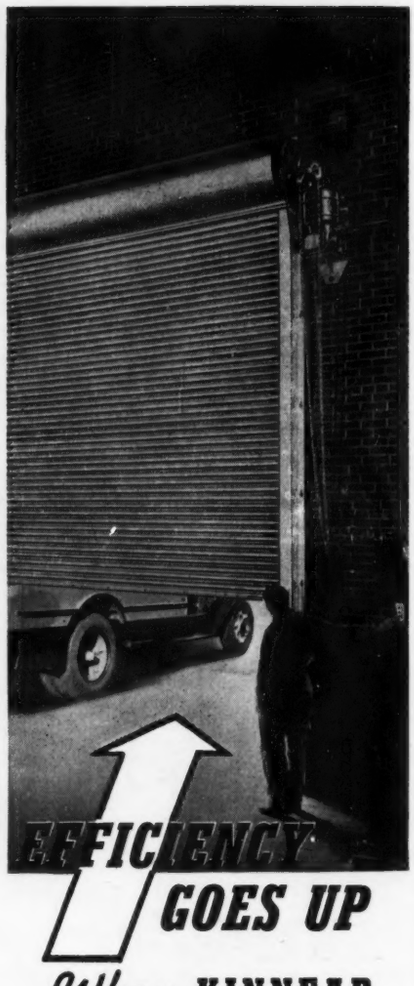

EFFICIENCY GOES UP
When KINNEAR ROLLING DOORS ARE ON THE JOB

You can make sure doorways are geared to high-speed production by specifying Kinnear Rolling Doors—operated by motor for maximum efficiency. Their vertical, coiling operation gives you full use of all floor, wall and ceiling space. The doors open overhead—completely out of the way of traffic and plant operations. The rugged attractive curtain ★ affords high protection against theft, riot, sabotage, wind and weather. And with remote-control switches, openings can be cleared or closed by a split-second touch of a pushbutton, from as many strategic points as efficiency demands.

☆ To save vital metals, the famous Kinnear WOOD Rolling Door is now filling many wartime needs for Kinnear Door efficiency. This time-tested door of interlapping wood slats features all the operating advantages of the inter-locking steel slat door originated by Kinnear. Write for details. The Kinnear Mfg. Co. 1900-20 Fields Ave., Columbus 16, Ohio.

KINNEAR
ROLLING DOORS

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